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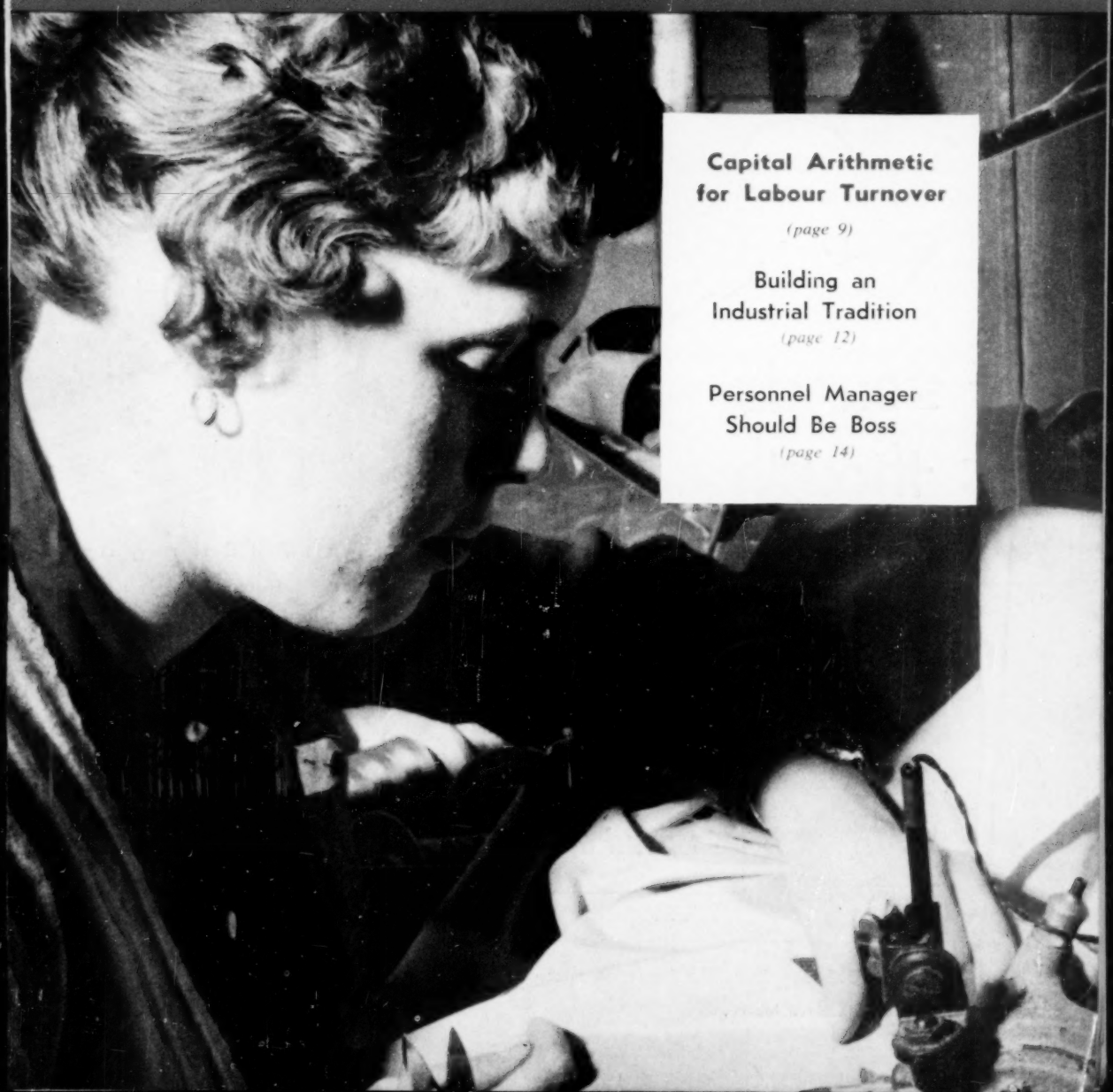
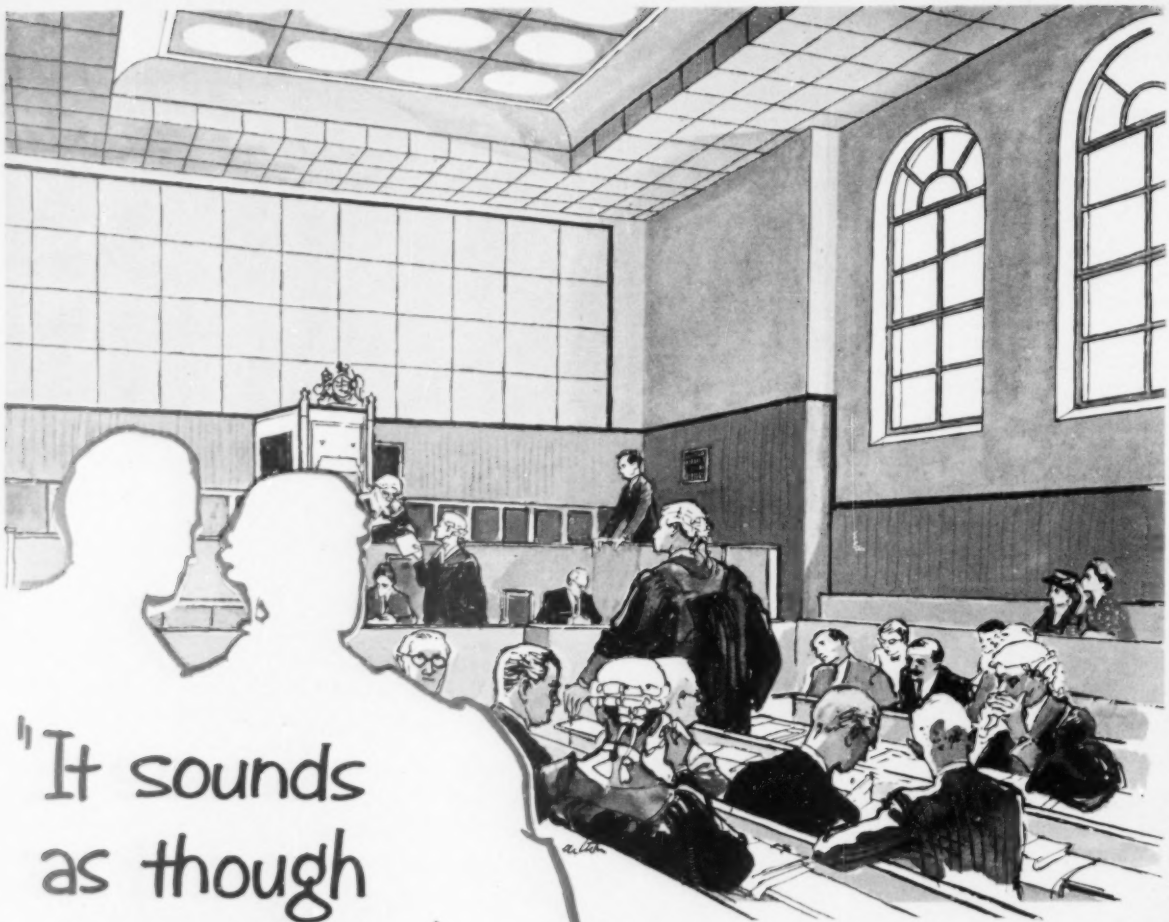


Capital Arithmetic for Labour Turnover
(page 9)

Building an Industrial Tradition
(page 12)

Personnel Manager Should Be Boss
(page 14)



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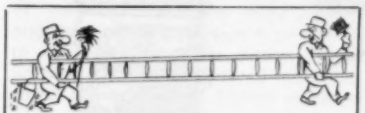

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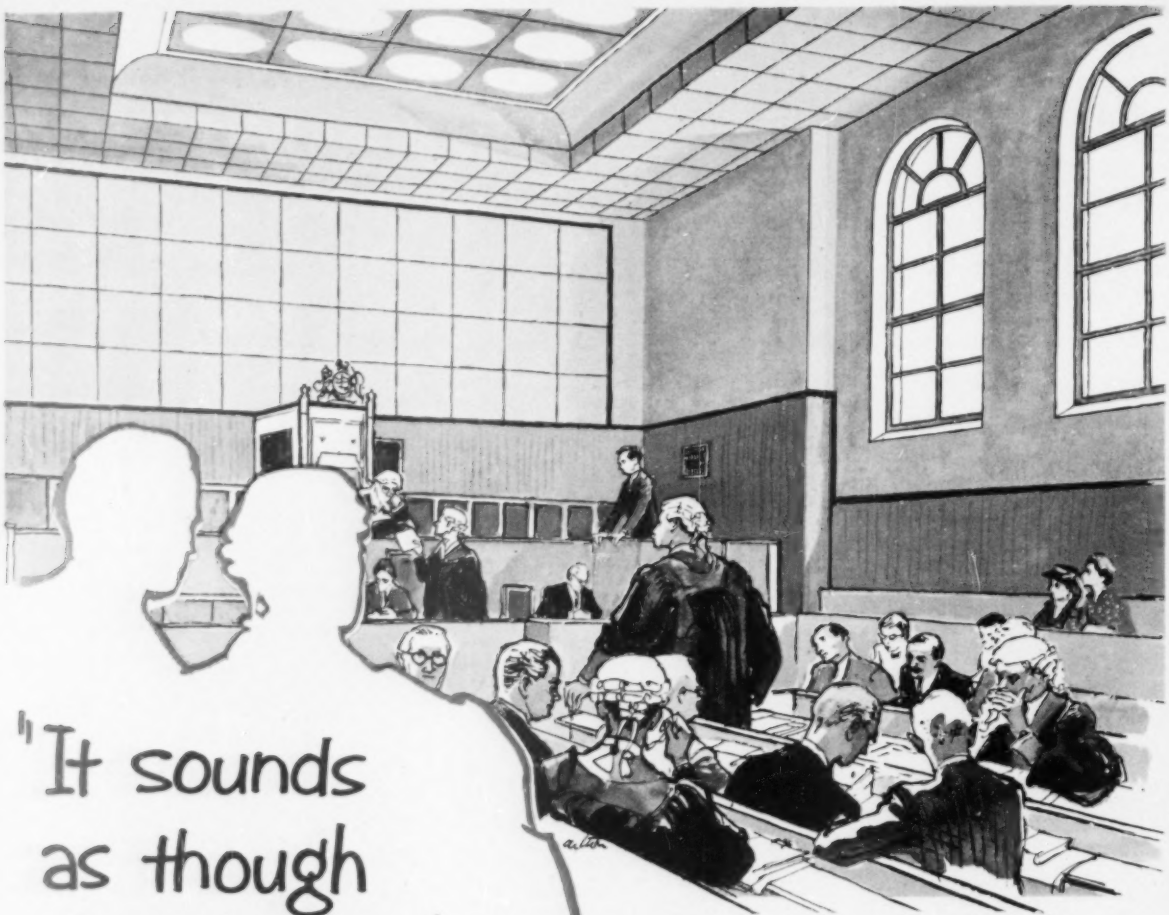

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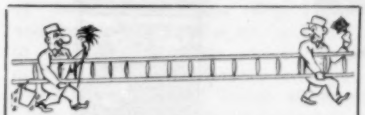

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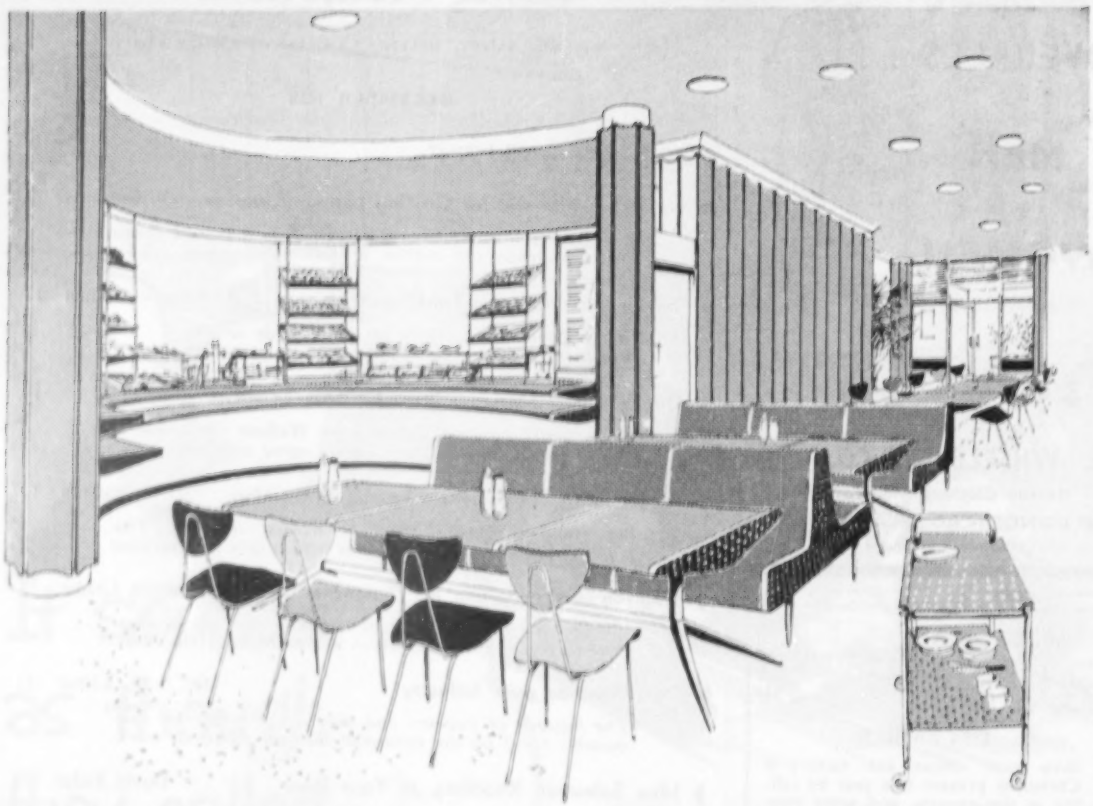

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Point Counter Point

At Last – Employers Get a Handout

WHENEVER a worthy cause raises its impecunious head, industrial organisations are a soft touch. To many employers it seems as if they are for ever digging their hands deep into their pockets. Youth club leaders, for example, are at this moment indebted to industry for £90,000 to finance their recreational plans for the young people of Britain.

It was a refreshing change, therefore, when the youth clubs repaid the compliment last month, and approached employers with the question: "What can we do to help you solve the problems associated with young people at work?"

The question was put in the form of a conference. For one day, over 100 training and personnel officers, youth employment officers and representatives of youth organisations from London and the Home Counties met in London to consider the wide sweep of the problem. The conference was sponsored by the London Union of Mixed Clubs and Girls' Clubs, an organisation which covers the whole metropolitan area, and looks after the spare-time interests of 23,000 boys and girls between the ages of 15 and 21. The work-time interests of its members was a completely new venture for them.

Experiment for Youth

In the practical sense, of course, it was *not* a conference, but a "feeler", an experiment in collaboration between youth's leaders and youth's employers for the solution of a common problem.

The original offer of assistance was not entirely free from strings. During the discussion there were several demands for top management to take a greater interest in its young employees, and for the education of middle management (especially supervisors) to a keener understanding of the young worker's thoughts and feelings. It was questioned, too, whether supervisors were generally fitted to bear the responsibility of training and dealing with young people; one delegate blamed management for appointing supervisors on the basis of length of service or craftsmanship, rather than of teaching ability.

But, throughout the discussion, the accusations, the criticism, it was obvious that the L.U.M.C. had struck a rich vein of collaborative resources. Now comes the problem of exploiting it to the full.

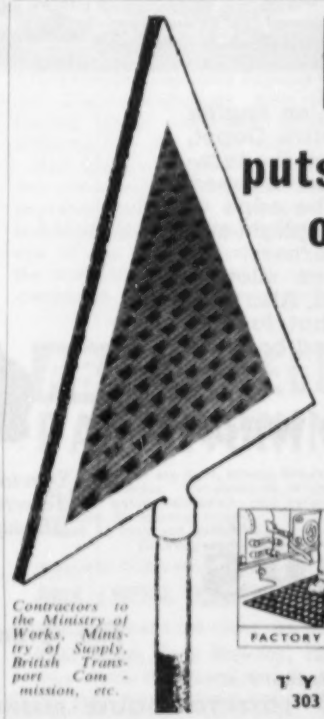
Follow-up Programme

According to a L.U.M.C. spokesman, a three-part follow-up programme is envisaged. It will need industry's support. First, a series of locally organised courses for young workers, sponsored by all employers in the area. These would be held once a week, for twelve weeks, with young people attending for about three hours at a time. Tutors would be recruited from local firms, from the district education authority and from amongst local youth club leaders. Subject: citizenship and workmanship—which, as the conference revealed, mean precisely the same thing. The courses would be followed, over an approximate nine-month period, by three week-end residential courses.

In the meantime youth leaders and industry would meet again at a larger conference—probably longer this time, and with greater attention to practical detail.

As a beginning, this three-part programme has immense possibilities—if only for young people and employers in the London and Home Counties area. Obviously the small firm has most to gain from the L.U.M.C.'s offer, and there must be many hundreds of such firms in the London area alone, which could with advantage, explore the proposition. Further information can be obtained from the L.U.M.C., St. Anne's House, Venn Street, London, S.W.4.

Here is an unusual opportunity for management. It would be a pity to reject it—and with it, the greater challenge.



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Unretouched photograph shows the actual Totectors Boot worn by Alan Sharkey. Although damaged, the steel toe-cap still remained intact.

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Point Counter Point

New Threat to Health

BUSINESS and industrial executives are infected with dandruff to a much larger extent than men in the lowest income groups. The causes: the growing stress of modern life, and infection by the dandruff fungus. In fact, one million people in this country today suffer from dandruff to a degree which requires more serious treatment than a mere medicated shampoo. 100,000 of them have acute seborrhœic dermatitis and should be regarded as sick.

This startling information is given by Bayer Products Ltd., who recently conducted a social survey into the incidence of dandruff. After questioning some 3,000 people, they believe that we are now faced with a new "disease of civilisation" and a "major public health problem".

Apparently, the "snow" on the shoulders of one's jacket is no longer to be regarded simply as a social blemish, comparable with egg-stains on the tie. It is far more serious. For a suggested means of control, see EQUIPMENT MARKET—Health.

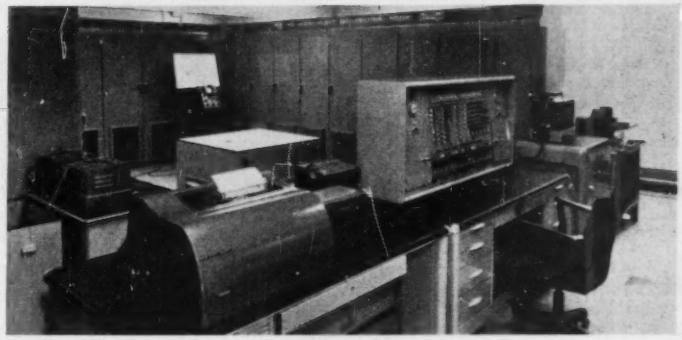
Electronic Challenge

BILLED in its five-language brochure as "one of the really significant business events of 1958", the Electronic Computer Exhibition at London's Olympia is currently living up to the organisers' expectations. For the first time, British management is presented with a comprehensive display of computers and ancillary equipment which have been—or are ready to be—geared to the demands of progressive firms.

The exhibition is, for all of us who are deeply concerned with efficiency in the factory and office, the "big thing of the future" suddenly transformed into the "big thing of the present". Appropriately, the organisers invited the patronage of the Duke of Edinburgh (the "Jet-Age Duke," as one daily newspaper titled him recently). Personnel managers will remember the extra impetus which the Duke's patronage gave to the Oxford study conference in human relations, two and a half years ago.

The Duke's association with these two events spotlights the need for our personnel policies to keep pace with technical change. The computer is one of the "New Machines" which the Institute of Personnel Management considered at its annual conference last October. It is, therefore, disappointing that the Business Computer Symposium (running concurrently with the exhibition) offers no paper which focuses upon the human relations implications of computer installation.

The impact of the electronic computer upon the working individual is the biggest bombshell that has ever landed in the personnel manager's field. And we intend only the purest objectivity when we ask: Will the IPM give a lead in organising a full-scale conference to put the problem into perspective? We cannot afford to ignore it. Our personnel policies are in danger of being overtaken by the relentless march of electronics.



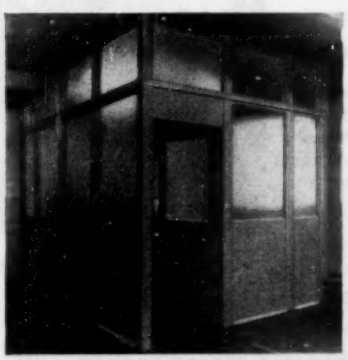
Computer installation at Newton Chambers & Co. Ltd.'s offices, Thorncliffe, Sheffield. Management "sold" the installation to employees by skilful handling of communications. A detailed explanation of its personnel implications received two-page prominence in the company's weekly newspaper, "Thorncliffe News".

Goodwill Computers

IN two months' time an electronic reading device will hum into operation at the Nottingham offices of Boots the Chemists. Installation of the machine—the Solartron ERA (Electronic Reading Automation)—will mark the first step towards a system of integrated data processing which Boots intend to develop in the next few years. It is, incidentally, the first such device to go into commercial use in Europe.

Stage two of the plan, scheduled for next summer, is the installation of an Emidec computer which will maintain a perpetual inventory of all the 60,000 lines stocked in Boots' warehouses. Total cost to the company for the two installations will be in the region of £1¼-million.

With this sum of money staked upon the project, the company made



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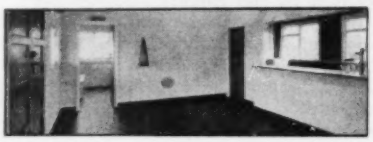

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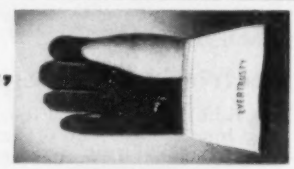

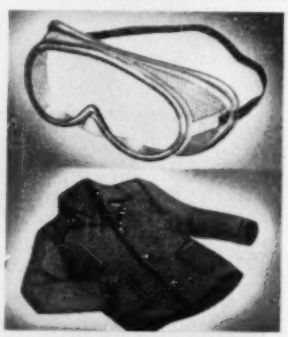

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Point Counter Point

sure that it would cost them nothing in employee goodwill. About 150 staff are directly affected by the installation. There will be no redundancy. This does not mean, however, the achievement of a human relations goal. When he introduced the project to the Press, Mr. D. S. Greensmith, the firm's general office manager, was careful to stress "the very real human problems connected with re-training people whose jobs disappear". For those 150 employees Boots offer the incentive of improved promotion opportunities—provided the employees can learn the necessary new skills.

It will be about two years before every department's operations are fed into the computer. By that time, the company hopes that electronics will have proved their worth as a direct aid to the employee's daily routine—by removing a lot of humdrum work, not only from the administrative staff at Nottingham, but also from the managers of Boots' 1,300 shops.

Illogical Steps

"FOND of chess, crosswords and string quartets". These are among the qualities specified in an advertisement which has been running for months in one of New York's most influential newspapers. The clients are looking for people to be trained as programmers for their computer department. The programmer's job is to break down the problem into a series of arithmetical steps which can be fed into, and computed by, the machine.

Psychological Reason

There is probably a sound psychological reason for this specialised search for raw programmer material. Music, for instance, is commonly thought to be the æsthetic art most closely associated with an ability for mathematics.

But here comes the discord, the lunatic gambit, the sum that just does not add up. It appears that in a number of such cases, the personnel department has been short-circuited in the search for computer staff. Reason: such jobs are "too creative" to be dealt with by the routine recruitment process.

Now, however, such firms are learning from bitter experience that a computer needs as much managerial control and attention as an assembly line or a buying department. And that personnel managers don't need a computer—or a string quartet—to help them recognise the right type of person for the job.

'Safety Sue'—a symbol created by the British Safety Council—presents a cheque for £12,500,000 to Mr. C. S. Garland, president of the National Union of Manufacturers. Industry saved that amount last year with a 5 per cent cut in the industrial accident rate.

This Month's Cover . . .

. . . shows one of the textile workers producing light clothing and industrial overalls in the Brighton factory of Harrimonde Ltd. As one of Britain's most popular seaside resorts, Brighton is not the obvious choice of area from which to recruit an adequate labour force for work of this nature. Harrimonde built a factory there three years ago. On page 12 we explain how they have gone out to interest the people (especially the young people) of Brighton in the factory and in the work which it does. By continuous, imaginative campaigning they have filled the vacancies with the right type and number of employees—in a phrase, they have created an industrial tradition of their own.

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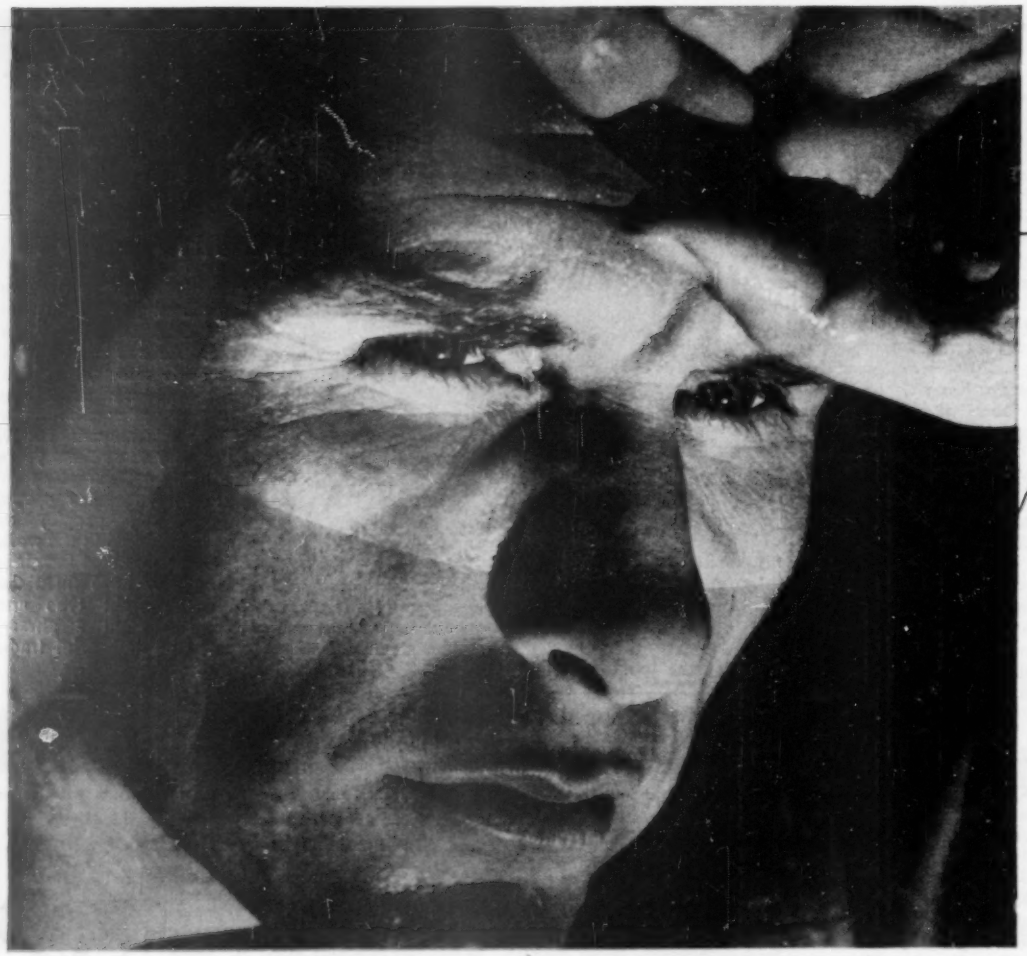

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RX A-E

Count your Workers as 'Additions to Plant'

A new kind of capital arithmetic for adding up your labour turnover costs

By B. EDWARDS

Much attention has been paid in recent years to the measurement of costs attributable to labour wastage. One scheme was outlined by H. J. Furness in a booklet—'The Cost of Labour Turnover'—published in 1950 by the Institute of Cost and Works Accountants. Studies of the problem have also been carried out by the Social Science Department of Birmingham University, and by the British Institute of Management which will shortly publish its findings in book form.

In this article the writer contends that the approach to labour turnover costing, which is exemplified in such schemes as that described by Furness, has certain defects which drastically limit its usefulness. He describes an alternative scheme, designed to overcome these defects and to give management a clear, objective assessment of its labour turnover costs.

THE usual approach to costing of labour turnover is to set out a number of categories of costs which are, or may be, incurred in connection with the entrance, training, leaving and replacement of workers. The categories chosen can be classified into three groups.

1. Those costs which can be ascertained with little difficulty and which are included without adjustment in the cost schedules. *Examples:* expenses incurred in advertising for employees, training costs, provision of personal equipment for the worker and the cost of scrap directly attributable to new workers.

2. Costs which can be attributed only in part to labour turnover and which therefore must be subjected to some form of allocation. *Examples:* costs of the personnel department, welfare section and wages department. (It is necessary to decide for each category what proportion of these costs is related to the turnover of workers and what proportion should be excluded as being due to other factors. In the case of personnel department costs, the industrial relations side of the work would normally be *excluded* whilst the costs of interviewing on entrance and exit, for example, would be *included*. A similar principle would be adopted for each of the other categories).

3. Costs which can only be estimated. *Examples:* increased costs of overtime worked as a result of labour wastage; extra wage costs caused by the maintenance of a larger-than-necessary labour force to compensate for a high turnover rate; loss of orders caused by the lack of labour replacements.

This type of scheme, though it appears to many people to be the only feasible one, can give very misleading results. The categories mentioned in the third group, for instance, cannot be estimated precisely. They are so subjective that no two observers would be likely to make the same estimate in any particular case.

How can a firm estimate how much it has lost in orders because of its inability to retain its workers? Would the estimate merely include those orders which have been cancelled because of the inability to complete by the appropriate date? Would it include those which have to be refused because the firm lacks the necessary production capacity, or those orders which are never placed simply because the prospective buyer knows from other sources that they cannot be completed in time?

Far Too Vague

It is quite possible, in any case, that if production planning had been more efficient, or capital outlay had been greater, some of the orders lost would have been gained. It is obvious that the categories in the third group are far too vague to merit inclusion in a serious attempt to find the cost of labour turnover.

I would make a further criticsm of these costs. Many of them are fortuitous or irregular. They are not persistent elements of cost; they crop up now and again—not necessarily at random—but usually in an unforeseeable manner. The knowledge that Firm A lost an order for £100,000 because of loss of employees at a particular time does not mean that Firm B, losing a similar number of

its employees, will suffer the same loss; nor does it mean that if the employees had left Firm A a month earlier or a month later, the same loss would have been sustained. In short, the inclusion of these non-recurrent or irregular costs *(even if they can be estimated correctly)* cannot be used as a stimulus to improve the labour turnover situation, simply because an identical situation is most likely to recur.

These costs are not purely labour turnover costs at all. They are costs which arise in a particular environmental situation. Their inclusion makes the comparison of labour turnover costs from one period to another, or from one firm to another, quite meaningless.

Yet, even though we were to eliminate these difficulties, and also to arrive at a satisfactory allocation of the cost categories in Group 2, a more fundamental objection would still remain.

Measuring — What?

Are we really measuring the cost of labour turnover, or are we measuring something else when we follow the orthodox procedure?

When a firm increases its labour force it must, necessarily, increase some of the costs we have here tacitly assumed to be labour turnover costs. Advertising, training and scrap costs will increase as the labour force expands, merely because new workers are being brought in. But if there is no corresponding *wastage*, can we say that these costs are due to labour turnover—as it is usually understood?

In another case, workers who are expensively trained during some previous period may leave, and difficulties in recruitment may result in a lower level of replacement. Apparent costs in the period in question would therefore be reduced, but nevertheless the firm would have suffered a real and measurable loss—*that of training costs for which the worker has yielded no adequate return to his employer.*

These criticisms suggest that the conventional method of measuring the cost of labour turnover is not without its difficulties. Is there any alternative approach which avoids these defects? Before we consider a possible alternative it is important to decide exactly what we want to do when we attempt to measure these costs. Lack of a clear, unambiguous aim has caused a lot of confusion in the past.

We ought to be seeking to examine those labour turnover costs which can be affected by changes in policy; to observe and to measure the changes that are taking place in these costs, whilst eliminating, as far as possible, all extraneous influences such as those due to the expansion of the firm.

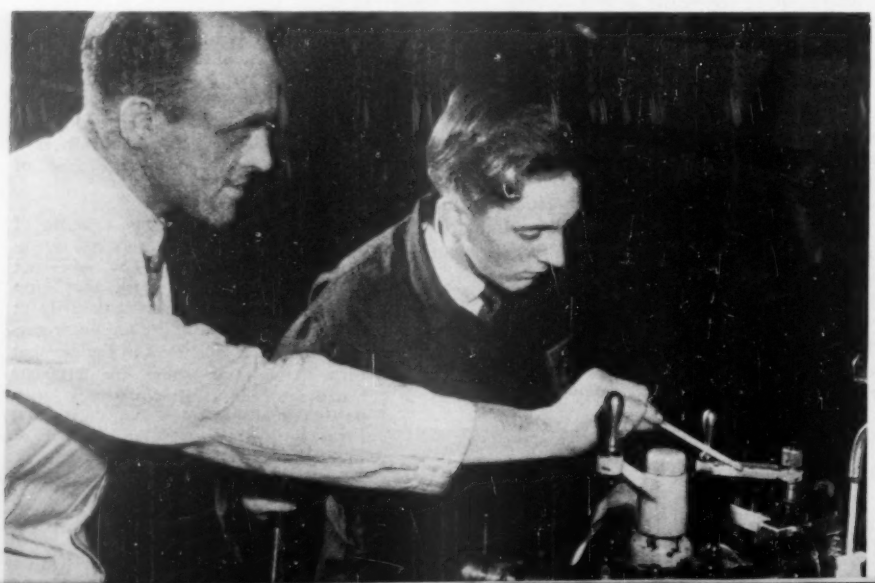
Is the costing of labour turnover necessary under these assumptions? For those firms where labour wastage is very low the answer is: *probably not.* In such circumstances the expense of administering a scheme of labour turnover costing might well exceed any benefits which would accrue from it. There are, however, others who are opposed to labour turnover costing because they feel it adds nothing to the information obtained from the normal statistics of labour turnover. They argue that sufficient information for policy decisions can be obtained by observing changes in the number of leavers.

This would be true, of course, if costs were constant from worker to worker. But this is not usually the case. A skilled tradesman requires a long period of initial training, but once that is completed he can usually transfer from job to job, needing little or no additional instruction when he starts his new employment. On the other hand, the semi-skilled worker usually requires fresh training in each new job: the skill acquired with one firm is of little use to another firm.

Varying Costs

Costs vary, then, with the type of job the worker is doing. They also vary from worker to worker in the same type of job. Some persons adapt themselves more readily to new situations, requiring less training or causing less spoilt work, than others. For these reasons, statistics of numbers of workers leaving (even if subdivided into classes of workers, length of service, and so on) are not really efficient substitutes for statistics based upon costs. It is, however, one thing to say this, but quite another to devise a costing scheme which avoids the disadvantages of the conventional method. But there is one line of approach which overcomes some of these difficulties.

Some of the earlier writers on industrial history contrasted unfavourably the treatment meted out to



INVESTMENT IN TRAINING

A trained employee represents an investment by his firm, just as much as a piece of capital equipment. In its widest sense an employer is losing capital when an employee whom he has trained leaves without having remained a sufficiently long time to repay the cost of his training.

Picture taken at the Birmingham training school of Guest, Keen and Nettlefolds (Midlands) Ltd.

workers in the early 19th. century with the care which employers took of their expensive pieces of machinery. It was suggested that many employers (and it is irrelevant for our purpose whether or not the suggestion was true) cared little for the conditions under which their employees worked, nor even if those employees earned sufficient to maintain themselves adequately. Yet those same employers were careful to maintain and repair the machinery they were using, and to make provision for its eventual replacement—*because the machinery represented a considerable sum of money.*

Employers today realise that a trained employee represents an investment by his firm, just as much as a piece of capital equipment. In its very widest sense an employer is losing capital when an employee whom he has trained, leaves without having remained a sufficiently long time to repay the cost of his training.

Capital Asset

Since this is the case, why not follow the parallel still further and base labour turnover costing on the same principles we use with capital equipment?

Treat the individual worker as a capital asset, with a certain estimated duration of "life" with the firm. The worker's capital cost is the cost of his induction and training (including the value of his wages in excess of output during the training period), the value of any spoilt work, plus a proportion of the costs of the personnel department and other allocable costs.

Allocation of the latter costs would be based upon:

1. the proportion of the cost in each category, which arises because of the movement of workers into and out of the firm,

Divided by:

2. the number of workers to whom the cost category in question has applied during the period concerned.

For example, if the cost of interviewing new entrants is estimated at £50, and during that period 50 entrants were engaged, £1 should be added to the capital cost of each entrant from this source.

Having obtained an estimate of the capital cost of each worker entering the firm, we should now make provision for depreciation (say, by the straight line method) of this amount, over the estimated "life" of the employee with the firm. For each month in which the employee remains, the appropriate proportion of the capital cost is written off; if the employee leaves before the capital cost has been fully amortised, the amount not yet depreciated should be written off in the period in which the exit occurs.

Additional training during the employee's service could be treated as "additions to plant" and dealt with in a manner similar to that described above.

WHAT DO YOU THINK?

Is this scheme practicable? What is your opinion? Comments, criticisms—or, better still, examples of costing problems—will be welcomed by the author. They should be sent to the Editor.

Depreciation

A total of the depreciation provisions for all workers should then be obtained. To facilitate comparison this total should be divided by the average number of employees during the period concerned.

We now have a scale of measurement which is comparable over time and, with certain reservations, from one firm to another. Additional costs of training incurred during expansion are not given any extra weight since the increased depreciation provision involved is directly paralleled by an increase in the number of workers in the denominator of the fraction. Greater weight is also given to the loss of workers in the early months of their service. Equally important, the more expensive the advertising, interviewing, induction and training of the worker, the greater is the amount included in each period as provision for depreciation.

A simple example is worked out below in order to clarify the points made above. It must be realised that, for reasons of simplicity, the example assumes that the capital cost is the same for all workers, that all workers enter at the same time and that the average number of workers employed can be estimated sufficiently accurately by adding those present at the beginning and at the end of a period, and dividing by two. In practice these assumptions will not generally be true, but the additional complications introduced should not obscure the essential similarity with the example.

Example A.

Suppose that 40 workers are engaged and trained at a cost of £25 each and that the estimated life of each worker is taken to be 50 months. The depreciation provision for each worker is thus £0.5 per month. The total depreciation provision for one month for the whole group is 40 x £0.5 = £20.

The cost of depreciation per worker is

$$\frac{40 \times £0.5}{40} = £0.5$$

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Example B.

Imagine now that in the period in question 10 workers had left and that there were no replaeements. The depreciation provision for the month would be made up of two elements:—

1. The £20 'normal' provision for the month.

Plus:

2. The remainder of the cost of the 10 leavers which is 10 x 49 x 0.5 = £245.

Therefore, total depreciation provision is £265.

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The above example, contrasting a cost of £0.5 per worker with £7.57 per worker is exaggerated, but it illustrates how a perfectly valid comparison can be made which would not have been possible using the orthodox methods.

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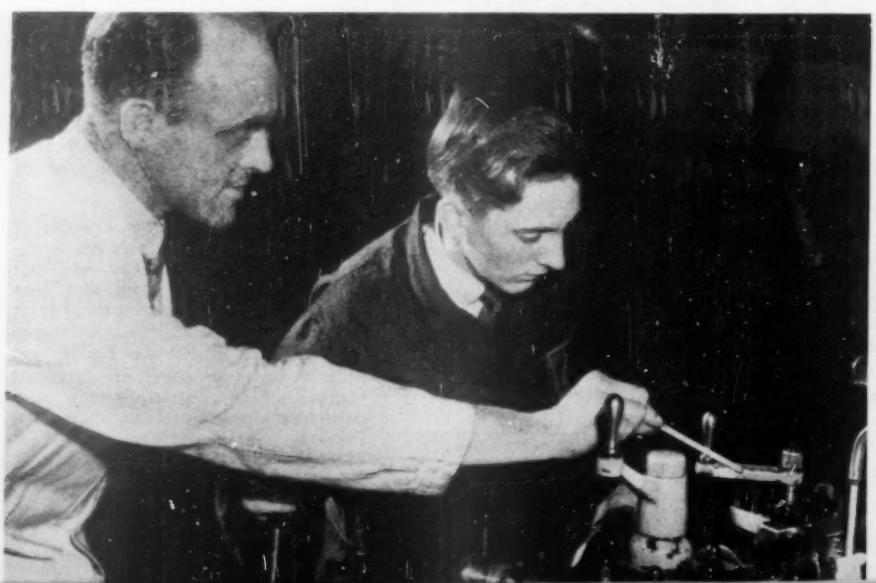

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Miss E. D. Catling
Harrimonde's Personnel Manager

This Firm has built its own Industrial Tradition

By BERNARD SLUMAN

YOU can't get something for nothing. That is an age-old maxim for businessmen. However, in the past ten years, many firms have been going out with the object of getting something *from* nothing. One of these is Harrimonde Ltd., manufacturers of light clothing and industrial overalls. When they built a new factory in Brighton, three years ago, all they found was the sea air and the rolling South Downs. No industrial tradition. No pool of experienced operatives.

From this they had to fill the vacancies in their factory. Fill them with girls who possessed the qualities that are essential to the textile industry —and desirable in any industrial worker — manual dexterity, good character and intelligence. The search for these talents is a full-time job for Miss E. Catling who, after thirty years in textiles, is now personnel manager of Harrimonde.

How do you set about achieving this goal in the uncharted territory of a district whose sole claim to fame for the past 150 years has been as a seaside resort? Where do you start? Miss Catling has the answer: build up your own working tradition; go out after young people, train them, give them experience. Persuade them that factory work can be as rewarding as other forms of employment. There must, she insists, be highly competitive incentives (a return for the worker's personal qualities), a planned staff induction scheme and very close community relations.

The Wage-packet

The predominant issue in a successful recruiting campaign is the wage-packet. The offer must be attractive. Miss Catling appreciates this; but she says, it should not be purely material gain.

It must include these three benefits:
1. Good Wages. To many workers, especially the young, 'good' is synonomous with 'high'. More important is the opportunity for rapid increases, dependent upon merit. Therefore, any employee can rise from a basic £3 to between £8 and £10 per week—within five years. Harrimonde stipulate this comparatively short space of time because they realise that many of the girls whom they employ will be thinking about leaving to get married when they are about twenty years old. The first small rewards can, in fact, come faster: girls can start working on bonus after the short training period of approximately six weeks.
2. Job satisfaction. High labour turnover figures are inevitable where workers are allowed to become idle and bored. Therefore, Harrimonde have geared their programme to maintain maximum production. Because of the diversity of models produced, the girls will be fully-employed, despite fluctuations in seasonal demands for textiles.

Closely linked to this is the use of the flow-line system of production. Unskilled, semi-skilled or skilled—all Harrimonde workers have a part in the manufacture of high-grade articles. To encourage and maintain high output,

they receive individual bonuses. So, although the garments are the combined work of all girls in a production section (this consists of from eight to twelve workers), a bonus is paid to each girl according to the figures which she has achieved in her own particular operation. This enables even the most inexperienced worker to gain satisfaction from her share in attaining the production target.

3. Job Security. The girls automatically feel more secure because they know that the work of the factory is organised to enable them to reach high salaries, without their being there for a life-time. Furthermore, redundancy is not feared since production targets are high and stable.

Personal Approach

The prospects implied by these three factors go a long way to dispelling the doubts of a community about factory work. Miss Catling communicates these features to young people by a direct and personal approach. In the first place, the Youth Employment Officer was invited to the factory so that he could gain a clear idea of the type of person who would be most suited to employment there. Consequently, he sends only those girls who are of the right type and who would most appreciate the work.

He has also acted as a lever to another part of the recruiting scheme. Through him, strong liaison has been established with the six local secondary modern schools. Miss Catling says that her best workers come from the lower 'A' and 'B' streams. She goes out to meet them, visits the schools and talks to pupils who are about to leave. As these talks are given in school time, she feels that they should have an educational value.

Choice of Career

They are broken up into the following three parts.

1. A discussion of the types of career which are open to school leavers. These she divides into the categories suggested by the National Institute of Industrial Psychology: jobs for those who like (a) things, (b) people and (c) working with their hands.

2. Hints on how to go about applying for a post: (a) dress sense for an interview (too many girls tend to overdress, she says), (b) the questions which one can expect to be asked and (c) how to make the actual written application.

3. She ends her talk with an outline of the work, conditions and prospects which are offered to young people by Harrimonde. She tries to convince them that the production of light clothing and industrial overalls is a *creative* task and that, therefore, work in the factory could be preferable to many other forms of employment.

Call in Parents

It is not only the girls who need to be approached, says Miss Catling. Often the parents are quite apprehensive about having their daughters working in a factory. Therefore, before actually employing a worker, she invites the mother or guardian to attend an interview.

The value of this procedure works both ways. For the mother's part, it enables her to see the work in which her daughter will probably be engaged. From the personnel manager's point of view, there is the opportunity of acquiring additional information about the background and character of her prospective employee.

She also has the chance of enlisting the parent's support. For example, she can be asked to ensure that her daughter keeps reasonable hours, arrives fresh for work each morning, eats an adequate breakfast, etc.

These aspects are of interest to employer and employee alike. They also reassure parents that their daughters' welfare is of concern to the firm, even when the girls are off the premises.

These are the direct attempts which Harrimonde have made to recruit an adequate labour force from a community—a community which, for the very first time, has been presented with all the problems of considering factory work as a means of livelihood.

There have been other, indirect results from the company's policy of encouraging its employees to enter into the life of the community. A choral and drama group and a mannequin parade have all helped to establish the name of Harrimonde in the area.

Family Feeling

It might be going too far to suggest that Harrimonde has become a household word. But, in the space of three years it has become a familiar, friendly word in hundreds of Brighton households. Today the firm employs 324 workers, including many mothers and daughters, groups of sisters—and among its few male employees, a father and son. One more factor in Harrimonde's all-out recruiting campaign? "Certainly", says Miss Catling, "our best recruiting officers are our own employees".

The Harrimonde production line: after training, each girl is set to work on the flow-line where she operates as an individual with her own targets and bonuses. High output is maintained by checking figures at regular intervals throughout the day.

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They are broken up into the following three parts.

1. A discussion of the types of career which are open to school leavers. These she divides into the categories suggested by the National Institute of Industrial Psychology: jobs for those who like (a) things, (b) people and (c) working with their hands.

2. Hints on how to go about applying for a post: (a) dress sense for an interview (too many girls tend to overdress, she says), (b) the questions which one can expect to be asked and (c) how to make the actual written application.

3. She ends her talk with an outline of the work, conditions and prospects which are offered to young people by Harrimonde. She tries to convince them that the production of light clothing and industrial overalls is a *creative* task and that, therefore, work in the factory could be preferable to many other forms of employment.

Call in Parents

It is not only the girls who need to be approached, says Miss Catling. Often the parents are quite apprehensive about having their daughters working in a factory. Therefore, before actually employing a worker, she invites the mother or guardian to attend an interview.

The value of this procedure works both ways. For the mother's part, it enables her to see the work in which her daughter will probably be engaged. From the personnel manager's point of view, there is the opportunity of acquiring additional information about the background and character of her prospective employee.

She also has the chance of enlisting the parent's support. For example, she can be asked to ensure that her daughter keeps reasonable hours, arrives fresh for work each morning, eats an adequate breakfast, etc.

These aspects are of interest to employer and employee alike. They also reassure parents that their daughters' welfare is of concern to the firm, even when the girls are off the premises.

These are the direct attempts which Harrimonde have made to recruit an adequate labour force from a community—a community which, for the very first time, has been presented with all the problems of considering factory work as a means of livelihood.

There have been other, indirect results from the company's policy of encouraging its employees to enter into the life of the community. A choral and drama group and a mannequin parade have all helped to establish the name of Harrimonde in the area.

Family Feeling

It might be going too far to suggest that Harrimonde has become a household word. But, in the space of three years it has become a familiar, friendly word in hundreds of Brighton households. Today the firm employs 324 workers, including many mothers and daughters, groups of sisters—and among its few male employees, a father and son. One more factor in Harrimonde's all-out recruiting campaign? "Certainly", says Miss Catling, "our best recruiting officers are our own employees".

The Harrimonde production line: after training, each girl is set to work on the flow-line where she operates as an individual with her own targets and bonuses. High output is maintained by checking figures at regular intervals throughout the day.

The Personnel Manager must be Boss

> one [illegible] small [illegible] the same principles should apply. Somewhere all personnel functions should converge in the person of one man who has sole charge of ALL personnel activities. It is my belief that this person should have a seat on the board: this is one of the lessons to be learnt from the States. If he has no seat on the board the next best thing is direct access to the board. This stems from my belief that the various personnel functions are together not less in importance than any other function—and in this I include sales and finance.

A reader puts his views on the question of seniority that was raised by John Wellens in PM & M, September

WHO should be Boss—Personnel Manager or Training Officer? Answer: the personnel manager; with which, judging from Mr. Wellens final paragraph, he is inclined to agree.

If they are to be of equal status nothing but frustration and confusion can follow, both for the two officials and for the employees. I do, therefore, agree with Mr. Wellens in his comment that where the personnel manager and the training officer are independently responsible to different directors, it is a form of out-of-date lunacy.

Compare Duties

For a true evaluation of the problem I feel we must look at this in its widest aspect. What are the duties of a personnel manager?

To quote the ILO, they are: "that element of management which is responsible for advising generally on all questions affecting industrial relations within an undertaking, and which in particular performs administrative duties relating to the employment, conditions of work, and well-being of the employees of the undertaking".

What, then, are the duties of the training officer? He is responsible for training graduates, pupils, apprentices, etc., to a degree of skill at which they will be an asset to the organisation, followed by specialised courses, such as supervisory training schemes, refresher courses, etc. I would suggest that the personnel manager's duties overlap those of the training officer, *but those of the training officer are ancillary to those of the personnel manager.*

Admittedly, where there is a high proportion of graduate trainees employed, the training officer must be of a calibre equal to the task, but are not similar attainments expected of the personnel manager? I don't believe that the question resolves itself into a question of whether we are dealing with craft apprentices or with economists and technologists, because these points affect both officers in a similar way, at all times.

Who is required to maintain a comprehensive picture of the manpower of the organisation, its labour turnover, its future requirements, etc? Invariably it is the personnel manager, and therefore it must be he—in consultation with departmental management—who determines when labour is to be recruited, how many and in what categories. Thus, in effect, he determines when the induction and training courses shall be held and the numbers that will attend them.

Personnel records are another indication of where the responsibility must ultimately lie. I am sure no one will dispute that the personnel manager must have the individual record of every employee, a record which must be kept as long as the employee remains with the organisation, and indeed for some time afterwards. For how long in proportion to an individual's working life does the training officer find it necessary to retain a record?

Promotion Records

Information necessary to management succession and other promotional schemes, must be maintained by the personnel manager since it is derived from many sources, of which training and education is but one.

Who is to negotiate rates of pay and allowances for individuals attending residential courses? Frankly, the only way to make the training officer the boss is to redesignate him personnel manager.

Seriously though, I do not wish to detract from the vital role of the training officer. It is simply that, if only because of the wider sphere of operation, the personnel manager must be the boss.

J. Harrowsmith. **Lincoln.**

THE CASE HISTORY

They Taught Themselves a Lesson in Training

Teaching and learning - everyone had a hand in this small firm's training programme

By D. E. BUXTON

Administrative Manager U.K. and Ireland, Sabena Belgian World Airlines

LESS than twelve months ago the London offices of Sabena Belgian World Airlines had an acute training problem. We were planning an intake of about a dozen new employees (about a fifth of our present staff) and we were anxious to provide them with a comprehensive training programme. The task was all the more urgent in view of the busy exhibition year which lay ahead.

This was our problem: Although our parent company in Brussels operates a large, comprehensive training scheme, our local British organisation is too small for the appointment of a full-time training officer. It is too small even for the introduction of regular training schools such as those run by our parent company, and by the national carriers in the United Kingdom.

It was not economically practicable to send the new recruits on a course in Brussels. In any case, conditions in Britain differ so much from those in Belgium that such a course would have been of little practical value.

P.M's Responsibility

This was a tough problem for management, but it centred largely around the personnel manager, since he was responsible for the administration of staff training. And, although he was not technically qualified to give instruction in the various specialised branches of an airline business, all eyes turned to him as the ultimate co-ordinator of the programme.

It was decided to prepare a local training programme, tailor-made for the instruction of the twelve new entrants, but which could be adapted later for individual recruits.

The task of preparing the detailed programme on each topic was given in each case to the head of the department concerned. Response was 100 per cent enthusiastic. Each department manager realised—and grasped—his opportunity, not only to take an active part in the training programme, but also to ensure that the instruction in his particular sphere of work was given the comprehensive emphasis which the efficiency of his department required.

The individual programmes were then vetted, from the policy point of view, by the general management. They were finally co-ordinated by the personnel manager into a single comprehensive training course to last seven weeks.

At this stage of planning it was discovered that the programme had a double advantage. The company's establishment in the United Kingdom had grown from an embryo staff of three in 1946, to over 100 in 1958. None of the current staff, many of whom had been with the company for a large part of these twelve years, had ever been given any general instruction in the firm's structure. So it was decided to let them participate in the training of the new entrants.

The course was launched with a seven-day series of general lectures. These took place each morning from nine until ten o'clock, and were attended by the new recruits and by every member of the current staff who could be spared from his or her desk. This included all senior employees and managers. The lectures were given in turn by managers and department heads. They consisted of non-technical instruction on company structure and its various departmental functions, in the U.K. and Belgium.

After 10 o'clock, current staff returned to their work while the new entrants continued with specialised courses—periods of one or two hours' detailed instruction on the work of the various departments—given by the most experienced employees in each branch of work.

The courses took the form of short talks, followed by free discussion. The trainees were encouraged to ask as many questions as they wished, on the

(*continued on page* 17)

Specialised skills—the reservations section at Sabena's London office.

NEW BOOKS ★ NEW FILMS

Search for Talented Youth

Talent and Society. David McClelland and others. *D. Van Nostrand Company Ltd., 28s. 6d.*

THE office boy who carries a managing director's homburg in his lunch packet, is becoming a rare species these days. Although there are still plenty of vacancies for "bright young lads," our educational system, which for so many years encouraged the stamp-licking-to-boardroom success story, has now moved irrevocably into the hothouse stage. Generously sprouting comprehensive schools and technical colleges, sandwich courses and vocational guidance, it is now primarily concerned, if not with early specialisation, then at least with early direction of talent.

This represents a new problem which industry will, sooner or later, have to share: how to choose and mould its future leaders, when nobody knows just what industry will be like in 10 or 20 years' time. It may come as a consolation to know that the Americans are having the same problem.

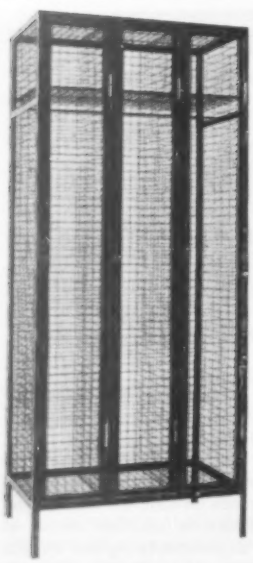
Back in 1950, John Russell, the executive secretary of the John and Mary Markle Foundation (an organisation for the selection and support of medical scholars), summed up the problem in his annual report: "This generation, like every other, knows that the future of the world depends on encouraging the best. But who are the best? How can they be identified at an early age? How should one go about finding the best Scout in America, the best young scientist in our high schools, the best boy to go to college, the best son of a taxi-driver, the best daughter of an automobile plant employee, or the best all-round student for deferment from military service? How can we find our future leaders at an early age?"

From these words, it becomes obvious that Russell conceived the question as searching over a far wider field than the specific demands of industry. But, since industry will have to take its pick (and probably its chance) from the larger pool of talented youth, it may be as well for the industrialist to examine the larger question before whittling it down to his own hopes—and fears—for the future.

This book is an attempt to answer that 64,000-dollar question. Shortly after Mr. Russell set his poser rolling, the Foundation approached the U.S. Social Science Research Council for advice. A conference of interested sociologists and psychologists was called, and in 1951 a Committee on Identification of Talent was set up.

David C. McClelland, the committee's chairman, is professor of psychology in the department of social relations, Harvard University. Other contributors include: two members of the department of child development and family relationships, Cornell University; and an associate professor of social psychology, University of Chicago.

The research was, perhaps, too detailed for the industrial manager's needs, and for the British reader the report dwells too long upon American racial and family patterns. But there is no question of its honesty and its valuable contribution to a subject which promises to tax the ingenuity of educationists for a good many years to come.



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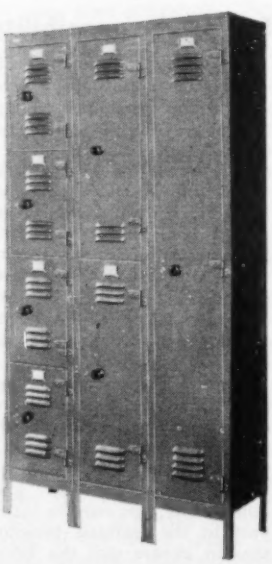

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Lesson in Training

(*continued from page* 15)

talks or on the previous lectures. Ample time was allowed for recapitulation and confirmation of the knowledge gained, and it was generally agreed that this method made learning easier. The instructors, too, found the practice informative: the questions raised often revealed new aspects of the work.

At the end of seven days all employees were taken in groups to London Airport, where they saw Sabena Airlines in action, and made a tour of the airport buildings and facilities. At this point the training course ended, as far as the current staff were concerned. New entrants continued with periods (varying from a day or two to several weeks) of practical work in each of the departments, before taking up the jobs for which they had been engaged. During these practical periods they were under personal supervision and guidance, and were shown the practical application of the theory they had learned.

Lectures Reprinted

Lectures and talks were printed verbatim and given to new employees before each practical course began, so that they could re-read them and refresh their memories day by day. Copies were also placed in each department, and were re-read during the following weeks by the current staff.

New employees who are recruited today are not given the same extensive course that is outlined above, but they are given a set of lectures to read and are encouraged to discuss any points which occur to them during practical training in their respective departments.

This training programme proved very successful in filling—as it was designed to do—several distinct needs. Expenses, in terms of time and resources, were small and widely shared.

Working efficiency undoubtedly improved, for each member of the company now grasped the significance of his own job in relation to the firm's operations as a whole. Moreover, they could appreciate the problems of their colleagues.

But, for the company, one of the most gratifying—and unexpected—results was the staff's increased respect for, and confidence in, an organisation which had their interests at heart.

Caution—words can be dynamite

Speaking or listening, we must deal in facts—not emotions

LAST month I wrote: "Not only in an interviewing situation, but in all our dealings with other people, our personality, our attitudes, and *even our choice of words* is affecting the response of the person to whom we are talking". The language we use is, in fact, the mirror of the sort of person we are. It reflects what we are feeling and our approach to life and the class or subgroup to which we belong.

For example, we can detect hostility in the words: "I wonder if the psychologist follows the advice he so *freely* gives to others?"; jealousy in: "what else could you expect from the Manager's blue-eyed boy?"; pride and loyalty behind: "I've been with this firm, man and boy, for 40 years".

We use words to express facts, but our choice of words and our way of expressing ourselves reflect emotions and attitudes as well. Unless we can understand the emotional undertone and interpret language correctly an opinion or an attitude may masquerade as a fact and we may be gravely misled.

The problem is further complicated by our individual interpretation of the simple nouns we use every day. For instance, try to establish a common set of facts with a friend or group of other people about such common objects as "table", "chair", "cat", "dog". You will be surprised how few common facts you can establish about them and how many different values will be attached to them by different people.

And when we come to such extremely abstract words as "democracy", "freedom", "justice", "joint consultation", the differences are even further accentuated.

Because we all think we know what we mean by such words, we do not always realise that the other fellow is meaning something quite different. The pitfalls are hidden, and therefore all the more menacing to effective communication.

A group of eighteen people were asked the question "Is the organisation of your department *efficient*?" They all answered: yes, they thought so. When the investigators delved a little deeper, however, their reasons were found to be very different. One man said his department was "efficient" because his superiors always had time to stop and chat, while another man said he felt it must be "efficient" *because he never saw his supervisor.*

Here are some rules to help you avoid some of these pitfalls. Avoid abstractions and generalisations, use concrete terms, use words in the most general use and—*disentangle facts from emotions when you listen to other people.*

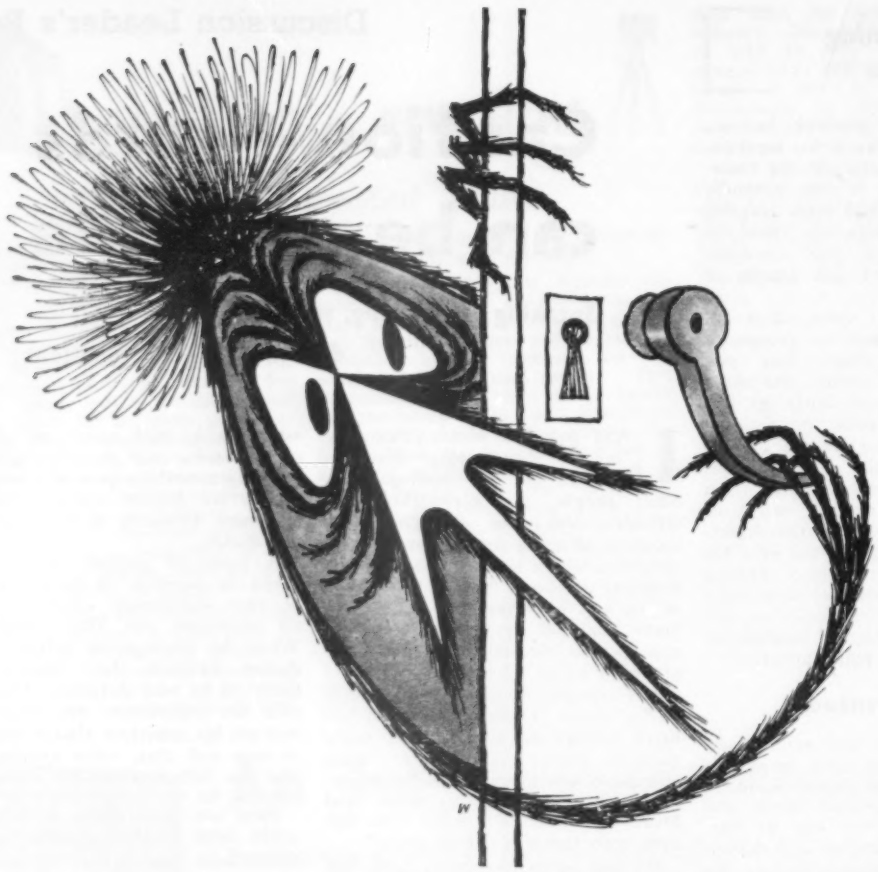
Can You Solve this Problem of Change?

IN past months we have seen how good discipline will arise naturally out of the daily activity of a group of people—if the group is in a state of healthy equilibrium. Can you apply the same approach to the methods of effecting change in a group?

Change threatens the equilibrium of a group in many different ways. How can managers make necessary changes without arousing the antagonism of the people concerned? What would you do in the following case?

For the past 25 years the production

(*continued on page* 44)



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News... Names... Notes

Ex-Regulars' Success in Job hunting

PRAISE FOR EMPLOYERS

THE Regular Forces Resettlement Service is running smoothly after twelve months of operation, claims the Minister of Labour.

At a recent Press conference he stated that 70 per cent of ex-regulars, excluding officers, had been placed in jobs within six weeks of having registered. To convince employers of the advantage of employing these men, more than 80,000 copies of the leaflet "Employing the ex-Regular", have already been distributed. This has been followed up by addresses to local organisations and by personal approach to employers. "The response by employers has been gratifying," said the Minister, "and much effort has clearly been directed to providing jobs to meet the redundancies".

Healthy Million

THE B Scheme of the Saturday Hospital Fund celebrated its first anniversary recently. More and more industrial organisations are running bulk membership schemes, said the fund's secretary, Mr. Llewelyn B. Dart. If public response is maintained he hoped to double the membership in the space of a few years. Records show contributions of £1,400,000 in the past ten years, and half-a-million cheques issued. The number increases annually.

The scheme enables members to insure against time lost as a result of sickness. Benefits are designed to cover costs incurred by sickness, which are not spent on treatment.

Foreman's Status

FOREMEN and supervisors in America have a definite status, which is appreciated by management and workers alike. Because the average supervisor's wage is 30 per cent higher than that of the most skilled operative, he is able to purchase the outward signs of authority and there is never any doubt about who is boss. These comments were made by Mr. J. R. Armstrong, chief education officer, Joseph Lucas Ltd., when he addressed the Leicester branch of the Institution of Works Managers.

Other signs of the foreman's position: he has his own parking ground and stenographer; he is paid on a different day and with a cheque of a different colour from that of the operatives. Although these might seem trivial points, Mr. Armstrong added, they led to a sense of responsibility and a pride in the job.

Computer Studies

A SERIES of intensive, practical courses for computer programmers has been arranged by EMI Electronics Ltd. After introductory lectures on such matters as machine characteristics and flow charting, students will quickly get down to case studies. There will be a panel of fifteen lecturers and a special feature will be the large proportion of exercise periods (over one-third), during which at least four tutors will be present to give individual attention to members of the class. Each class will be limited to fifteen students, and will last three weeks. Several places have already been reserved for the next course which starts on January 12, 1959. Further details from EMI Electronics Ltd., Hayes, Middlesex.

Methods Course

THE training of personnel who will introduce pre-determined motion-time systems is the object of courses which the University of Birmingham hope to hold in 1959. As a beginning it is proposed to run a three-week course on Methods Time Measurement from January 19 to February 6. An examination will be held at the end and those who pass will be awarded the official M.T.M. certificate of competence from the M.T.M. Association of the U.S.A. Further information will be provided by the assistant director, Institute of Engineering Production, University of Birmingham, 16 Norfolk Road, Edgbaston, Birmingham, 15.

NEWS SNAPS

FACTORIES ACTS for supervisors have recently been summarised in a revised, non-technical version by the United Steel Companies Ltd. This is mainly the work of Mr. N. H. Jones who, after forty-two years with H.M. Inspectorate of Factories, is now the company's safety consultant.

NEW ISSUE—The current MoL quarterly pamphlet "Accidents—how they happen and how to prevent them", HMSO 1s. 3d., covers foundries, fires and explosions, building and constructional work, food manufacture, process machinery, electricity and chemicals.

ART WORKERS—£10 for the employee who can submit the best design for a new pictorial heading of the Triplex News Bulletin has been offered by company chairman, Sir Graham Cunningham.

MOVING HOUSE A PROBLEM?—Not for employees of Carson Bros., makers of office furniture, who have taken premises in Basildon New Town. Factory vehicles were used to move workers' furniture and, to combat nostalgia, free coach trips back to London have been arranged for one weekend each month.

THREE-IN-ONE PROTECTION FOR EMPLOYEES

Staff of Glaxo Laboratories Ltd. are injected with the firm's new three-in-one influenza virus vaccine. It comprises the strains most likely to cause any epidemic in Britain this winter—including the Arian type.

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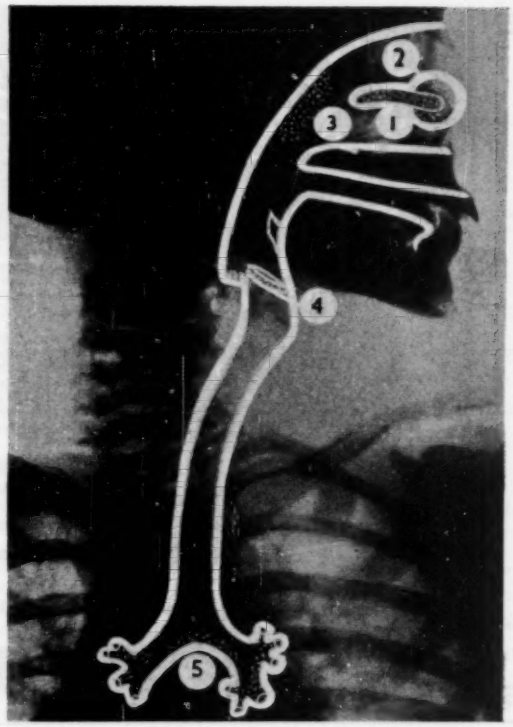

X-ray diagram of the respiratory tract. The organs shown are: 1, nose; 2, nasopharynx; 3, larynx; 4, trachea; 5, bronchi and bronchioles. The author explains their significance on the next page. Dotted areas show the danger points where dust settles and causes damage.

Free and painless breathing—any conditions which interfere with this may seriously affect the intellectual ability and physical well-being of the worker

The Dark Shadow Over Industry

By Dr. E. E. LIEBER
Medical Officer, Microcell Group of Factories

INDUSTRIAL medicine is essentially environmental medicine. The most important environmental factors are the chemical properties and physical states of materials handled, plus their quantities in the working atmosphere, in the form of dusts, fumes, gases, vapours and liquids.

The major health problem confronting industry is, in my opinion, dust. The Report of H.M. Inspector of Factories for 1955 shows that 2,700 persons died of dust diseases of the lungs, including various forms of fibrosis, pneumoconiosis and byssinosis. Eleven persons died as the result of gassing, and 37 from other notifiable industrial diseases.

Of the dusts which have darkened men's lives, silica and asbestos have in the past been the worst offenders. Silica exerts its maximum destructive effect on the pulmonary tissues. The same is true of asbestos, which is a complex silicate containing iron, magnesium and calcium. The size of the particles is very important. If they measure 10 micron or over, they cannot reach the pulmonary alveoli, but the most dangerous range of particle size is between 0.2 and 5 micron.

Shallow Breathing

It is interesting to note that exposure to high concentrations of dust for short periods is usually less damaging to the respiratory system than prolonged exposure to low concentration since, in the former case, the subject rapidly resorts to shallow breathing as a defensive measure.

The only symptom of dust disease of the lung is dyspnœa (shortness of breath). Sometimes the victim will complain of shortness of breath in walking to and from his work, rather than when working. In persons exposed to irritant vapours and sprays the picture is different. They may get fits of violent uncontrollable coughing, laryngeal spasm and pain in the upper air passages and the eyes, but once the acute symptoms are over, no subsequent ill effects are felt.

The whole problem of inhalation hazards in the glass fibre industry has been carefully studied in this country, in the U.S.A. and on the Continent, particularly in France and Germany. Radiological and other investigations have failed to reveal any evidence of fibrosis or other lung damage arising out of contact with glass fibres, and statistics show a comparatively low rate of absenteeism in this industry. The particles of glass may penetrate as far as the palate and may cause a slight dryness of the throat with allergic manifestations, and evidence of irritation similar to skin phenomena is often noticed. But normal dust extraction equipment should provide adequate protection for workers engaged in handling glass fibre in any form.

Human efficiency depends, among other things, upon free and painless breathing. Any conditions which inter-

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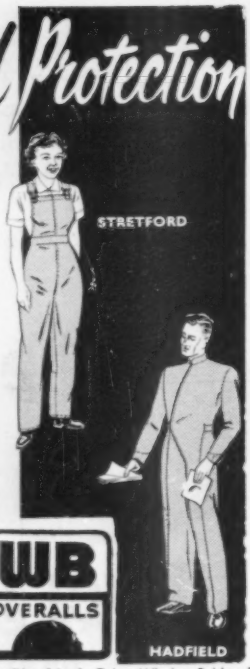

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WB1/2

A NEW CATALOGUE

This comprehensive Catalogue, published by the Pioneers of Industrial First Aid, includes a section summarising British First Aid Regulations. It is available free to purchasers of First Aid equipment *who apply on their Company's letterhead, and refer to this journal.*

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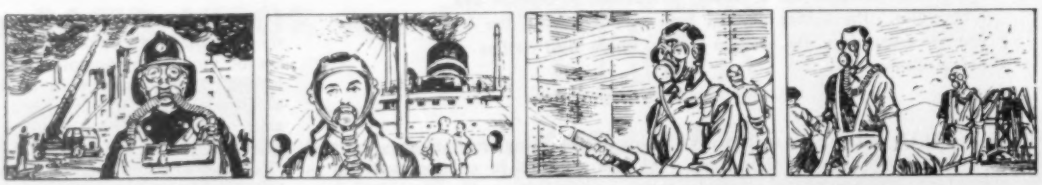

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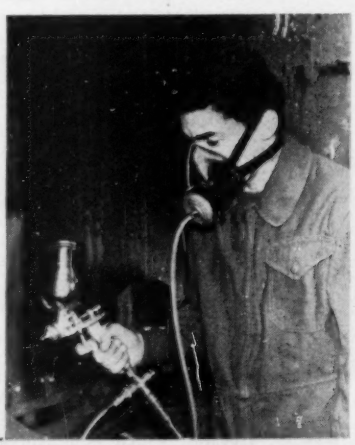
Eliminating the need for costly extraction plant, this new air-fed mask gives complete protection and breathing comfort to paint sprayers working indoors or outdoors. Since no part of the filter is exposed, it cannot become clogged, and is therefore ideal where the atmosphere is heavily loaded.
The flexible tube of lightweight plastic is coupled to the main sprayer air supply via a simple adaptor and quick-release plug, which can be fitted to the gun handle within minutes. Adaptors are available for all types of gun.
An inner flange on the soft rubber facepiece ensures an airtight fit on all shapes of face. The movements of a man using this outfit are freer, since he requires no additional equipment. *Write for further details.*
SIEBE, GORMAN are long-established suppliers of all types of safety equipment to the Admiralty, the Public Services and Industry.



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TELEGRAMS: SEIBE, CHESSINGTON. TELEPHONE: ELMBRIDGE 5900
Manchester Office: 274 Deansgate Telephone: Deansgate 6000

fere with this may seriously affect the intellectual ability and physical well-being of the worker. The majority of industrial poisons enter the body through the respiratory tract—except nitrobenzene and nicotine which are absorbed by the skin, and radioactive substances* which are ingested.

In studying this aspect of industrial disease, consideration must be given to the whole respiratory tract. The sketch (shown on previous page) gives a simple illustration of the anatomy and physiology of the respiratory tract. The organs shown are:—

1. Nose
2. Nasopharynx
3. Larynx
4. Trachea
5. Bronchi and bronchioles.

The functions of the first two are: to warm and moisten the air breathed in, to filter and to retain dust particles.

Anatomically, the *trachea* and *bronchi* are chambers where inspired air mixes with expired air. Because of this, people who work in polluted atmospheres soon become shallow breathers. At the bifurcation (fork) of the trachea there is some resistance to the inspired air and it has been discovered that the frequency of malignant growths at this site is due to the dust which settles there (see sketch).

Chronic Bronchitis

Medically, England is known to be a land where chronic bronchitis is prevalent and any atmospheric pollution, even by chemically innocuous dust, can cause chronic bronchitis.

Gases and dusts pass through the respiratory—the lowest—part of the lungs, and both innocuous and harmful dusts pass into the lung tissues. The respiratory tract can be injured by many chemical substances. Those listed in Tables I and II are peculiar to the plastics industry. As the tables show, these substances cause allergic conditions by inhalation, and many also cause skin manifestations. The gases and vapours of table II are in the molecular state and so can find access to all parts of the respiratory tract. Where their action on the air passages and lungs is concerned, their physical properties—in particular their solubility in water—are of greater importance than their chemical composition. It is for this reason that ammonia affects the upper respiratory tract more severely than the lower, the greater part being removed by the moisture of the mucous membrane of the nose, nasopharynx and trachea.

On the other hand, the converse is true of insoluble gases. Nickel carbonyl, an insoluble gas, has little or no effect on the upper respiratory tract, but damages the lungs severely.

* Radiation hazards will be discussed by Dr. Lieber in a future article.

IS THIS THE AIR YOUR WORKERS BREATHE?

TABLE I—DUSTS

Type	Source	Hazard
Glass monofilament particles	Cutting and handling of glass mats, cloths, rovings	Inhalation, skin irritation, pharyngitis, tracheitis
Glass and polyester or epoxy resin dust	Machining of cured mouldings	Skin irritation and dermatitis
Cotton, linen and phenolic or other resin dusts	Machining of cured mouldings	Skin irritation and dermatitis
Wood dust	Machining of timber	As above with the additional risk of explosion

TABLE II—VAPOURS

Type	Source	Hazard
Styrene	Resin compounding and utilisation	Pharyngitis
Methyl ethyl ketone peroxide	Accelerators	Pharyngitis
Phenol/formaldehyde	Phenolic and urea resins	Rhinitis, pharyngitis; various other allergic manifestations
Trichlorethylene	Degreasing baths	Acute narcosis
Benzene, toluene, xylene, ketones, alcohols and esters	Solvent vapours as in paint spraying	Various allergic manifestations, severe anæmia, liver damage
Ammonia	Phenolic moulding	Unproductive cough, laryngeal spasms.

Expert Knowledge

It is clear from this that the industrial medical officer should know the full extent of atmospheric pollution in the various parts of the factory under his supervision. The Department of Scientific and Industrial Research has issued a booklet giving specific colorometric methods for determining dust concentrations. But there is little published evidence of the deleterious effects of the various polyester and epoxy resin dusts.

We have various methods of assessing the toxicity of a substance. First, we can measure the effect on experimental animals such as mice, rats, guinea pigs, etc., of various concentrations of the contaminant administered by mouth, inhalation or by injection. A second approach is to study the chemical nature and toxicity of the substance under investigation, and its related compounds. Thirdly, the industrial chemist, who has synthesised or introduced the new material, can usually go some way towards providing some of the following:—

1. Chemical structure.
2. Chemical and physical properties;
3. Probable industrial use;
4. Known hazards, such as inflammability, corrosive behaviour etc.
5. He may also offer his personal observations on whether the material

Peter's SANITARY TOWEL Vending Machines

provide these advantages

- A mechanism that can be adjusted to operate on any number of coins.
- A choice of brands—soluble and non-soluble.
- An assurance of unlimited supply.

Particulars from

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AUTOMATIC MACHINES
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MARTINDALE
PROTECTIVE MASKS

Patent No. 479,807
Registered Design No. 819,509

Protect your workers adequately from dust and mist inhalation. Light and comfortable. Fit everybody perfectly. Weight ¼ oz. Allow free breathing, clear vision, use of goggles, free speech. The workers will wear them whether watched or not. Reduce absenteeism. Do not cause perspiration or skin irritation. Always clean because pad is easily replaced.

Send 3'3 for mask and 6 refills (trial sample)

NEW REFILL DISPENSER PACK

Positively saves wastage and spoilage of Filter Pads.

Our refill pack of 25 Filter Pads has now been completely redesigned so that it can be *resealed* as each pad is extracted and used. The new hygienic method of packing ensures that *all* the pads are usable and no wastage can occur. Be sure to secure genuine Martindale Pads—they cost no more, are more efficient and in the new pack show a great advantage in cost.

MARTINDALE ELECTRIC CO. LTD.
41 Westmorland Road, London, N.W.9 Tel: COLindale 8642
also at 25 Elmbank Street, Glasgow, C.2

All hands 'on deck!'

Beware of cuts and grazes! Neglect can easily turn them into 'lost time' accidents. Protect them with PRESTOBAND—and keep your hands at work.

PRESTOBAND is a pure surgical cotton gauze bandage, specially treated to make it self-adhesive. It takes no time to apply, and speeds up the healing of minor injuries. It is easy and painless to remove—it comes off cleanly and leaves no mark. No first aid box is complete without PRESTOBAND. For bulk users, PRESTOBAND is supplied in a special 'Hospital Pack', saving about 40% on costs: 12-yard rolls, in three widths—⅝", 1" and 2". Samples on request. *From your usual supplier, or from the manufacturers, Vernon & Co. Ltd., Preston, Lancs. Tel: Preston Priory 83293*

thanks to **PRESTOBAND**

THE ANTISEPTIC SELF-ADHESIVE BANDAGE

Sticks to itself, but NOT to the skin!

adversely affected his nose, eyes, skin or lungs;

6. He may indicate such safety precautions as are known to him to be necessary, e.g. gloves or goggles.

With this information as its starting point, all medical supervision of hazardous work should take the following form:—

1. Study and proper medical selection of personnel, including patch testing;
2. Regular clinical examination;
3. Periodic X-ray examination of the chest;
4. Frequent review of problems relating to dust and fumes in workrooms;
5. Training of workers to a reasonable awareness of hazards inherent in the processes which they operate.

Medical examination of personnel is two-fold: first, the initial examination of applicants for employment, followed by regular six-monthly checks on the health of employees.

One object of the initial examination is to prevent applicants from entering the works if their respiratory physique is defective through malformation or disease.

The regular medical examination of employees enables us to detect at an early stage any incidence of harmful effects so that, where necessary, steps may be taken in the employee's interests to arrange for transfer to a more suitable occupation. It is also a means of detecting the incidence of pulmonary tuberculosis which, should it be found, calls for the transfer of the affected employee—not only in his own interests but those of his fellows. A further useful function of the regular examinations is to provide cumulative evidence of the improvement obtained in working conditions in the factory.

X-Rays, Patch Testing

X-ray examination alone does not prevent anyone from contracting chest disease, but it does indicate the need for the employee's removal from a dusty occupation before the damage to the lungs has gone too far. Clinical examinations, X-rays and patch testing can also pin-point in which part of a process the danger lies. As such, they are very valuable in focusing attention on the need for better dust control in these plants.

Treatment of an affected employee should consist of the usual routine measures, *together with removal from his working environment until cured.*

Back-to-Work Exam.

It is essential that workers who have been absent because of sickness should be examined on their return to work as to their fitness for their particular job. If any doubt arises it is better that they should be placed, temporarily or permanently, in other work, lighter or less hazardous, possibly in another department—rather than be pronounced unfit for return to duty. This is obviously not always possible in smaller firms, but some large organisations have set up special workshops where injured or disabled workers are employed until rehabilitation is complete.

Employees and employers alike look to the medical officer for expert advice on what to do in the case of sickness or injury. But his voice should be heard long before this. The works doctor—and the personnel manager, in collaboration with him—can play a vital part in teaching the worker what *not to do*, so that the hazards of his work are forestalled right from the beginning.

Some of the harmful conditions found in industry, such as excessive dust or fumes caused by lack of adequate ventilation—which, in turn, give rise to cases of occupational disease—are an indication of the failure of the preventive programme for which the industrial medical officer is responsible. It is his duty to recognise and appreciate the significance of such conditions at an early stage and press for the action necessary to control them.

This emphasises the importance of the doctor in the management team. Only when the industrial medical officer is accepted as an integral part of the management organisation will the benefits of effective, fool-proof medical supervision be fully achieved.

This article is condensed from a paper given by the author to a conference of the British Plastics Federation, Brighton, October, 1958.

PRAT-DANIELS
(STROUD) LTD

Ventilation

Fume extraction

Dust collection

WHITECROFT, NAILSWORTH, GLOS.

NAILSWORTH 446-7

add to your Personnel Efficiency

Line up with the times to provide a silent constant service to your personnel of those items that mean so much for general efficiency—cigarettes, confectionery, fruit, etc. These sturdy Autobar Vending Machines can serve eight separate items and embrace such unique improvements as coin selector and rejection mechanism to safeguard your interests to the fullest.

Autobar Vending Machines are insta d etc. on a profit sharing basis.

Autob a

Information and immediate service f m.

The Autobars Co. Ltd., High Holborn, Lo on,

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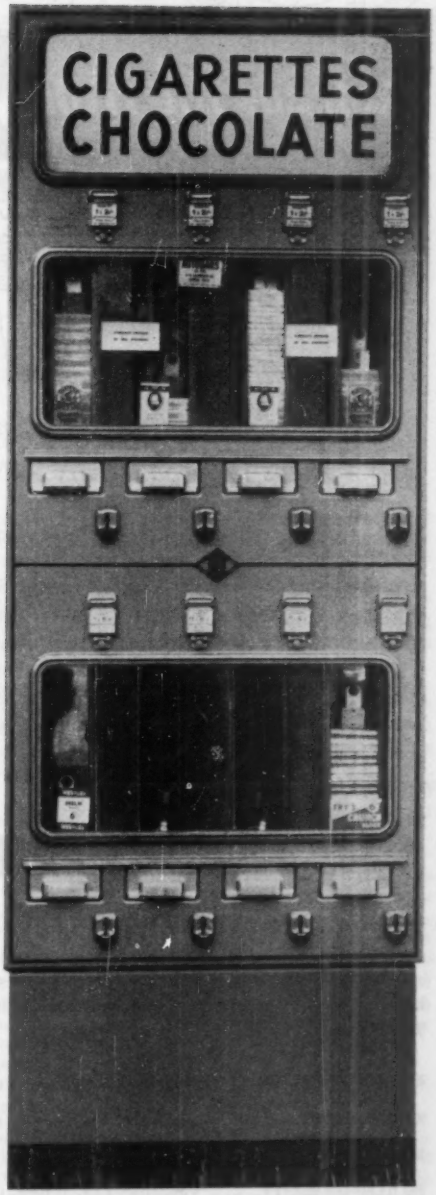

This Autobar 8 column Vending Machine takes just 432 square inches of floor space to serve eight pre-determined items, backed by a nation-wide operational service.

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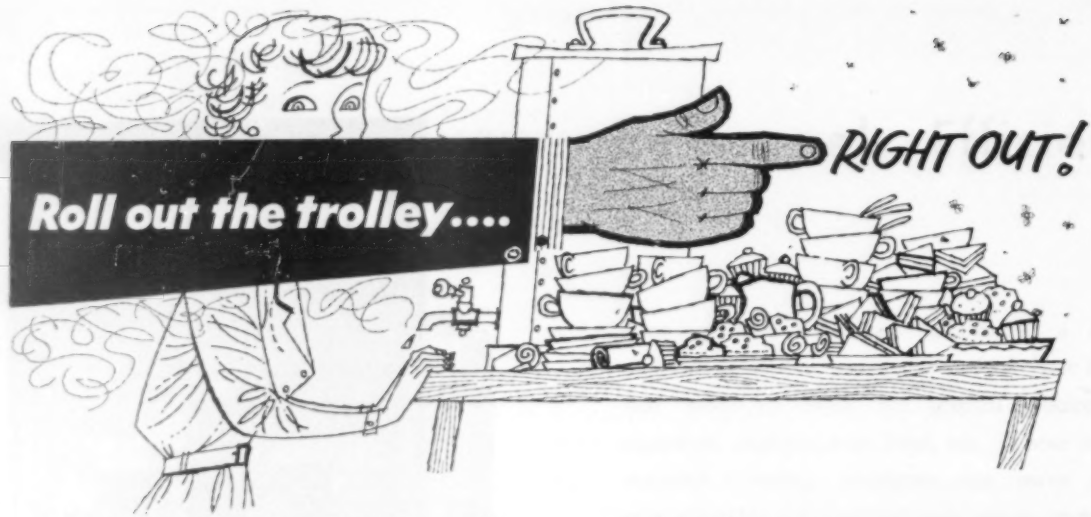

Vendepac cuts out mess and muddle, saves time and money, steps up productivity, AND IT DOESN'T COST YOU A PENNY!

More and more factories and offices are installing Vendepac automatic vending machines to give a night and day, seven-days-a-week service for Biscuits, Sandwiches, Snacks, Confectionery, Cigarettes—and a variety of hot and cold drinks served in hygienic disposable cups.

Vendepac service is *completely* automatic: your employee has only to insert a coin and press the appropriate button. Vendepac service, moreover, does away with the need for extra serving staff.

Vendepac

AUTOMATIC FOOD SERVICE

VENDEPAC steps up production, saves time and labour, keeps workers alert and contented—at no cost to you! There is

NO INVESTMENT COST ... Vendepac Ltd. provide the machines

NO EXPENSE ..... Vendepac Ltd. service the machines

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NO RESPONSIBILITY ..... Vendepac Ltd. insure the machines against *all risks*.

VENDEPAC LIMITED · SLOUGH · BUCKINGHAMSHIRE

Milk for your office workers—in a Tetra Pak carton. Machines by Farrow & Jackson Ltd. and Automat Machine Sales Ltd.

Above: a W. M. Still & Sons Ltd. Tea Cub on a factory site. A case history of this machine is given in the article. Below: an automatic hot food bar by the German company associated with Autobars Co. Ltd.

The Idea Salesmen will be knocking at Your door

With a wide range of machines they plan to make your industrial canteen fully automatic

By DAVID JUDGE

YOUR employees' canteen is "virgin territory"—as far as the makers and operators of automatic vending machines are concerned. As they see it, there is ample room in many such canteens for banks of machines to cater for the feeding and refreshment needs of hundreds of workers. Already, the trade journal of automatic selling, *Vending*, has stated in an article on industrial catering: "The industrial market is one of the greatest outlets for vending machines and services".

Mr. R. K. Richards, managing director of Autobars Ltd., puts the position much more bluntly: "The whole future of vending", he says, "lies in industry".

This means that in 1959 you and your company will be the target for a publicity barrage more intense than you have ever known.

But this is not just high-pressure salesmanship. Industrial canteens, say the manufacturers, *need* vending machines. Why? Because management is still battling with rising costs, increased canteen subsidies and wastage.

The personnel manager is singled out as a special target for publicity because, to a growing number of vending machine salesmen, he is one of the most important people in the industrial organisation. To quote Mr. J. H. M. Cooke, sales manager of the Vendor Sales Division of Chadburns (Liverpool) Ltd.: "The installation of venders in the factory is a welfare service; it follows that it is properly the province of the personnel manager to arrange for their installation".

As for catering costs, most makers can back their claims with cost-cutting case histories. The following example is supplied by W. M. Still & Sons Ltd. It is chosen because it refers to tea; and tea vending still attracts most attention from catering and personnel managers. As one personnel officer remarked to me recently: "Why talk about fully automatic canteens? I'm still trying to make my mind up about the right tea machine for the works".

In a Birmingham engineering firm—employing 600 workers, with 100 on the night shift—Stills installed six Tea Cubs (in pairs) in the two main production shops. Before this, the firm's canteen used to send four tea trolleys around the workshops, each operated by one girl, during the two day-time breaks. Selling averaged 150 cups per trolley.

Aid to Production?

Employees were inclined to slow down production when the tea trolley was due to come round and to crowd around it. Since the venders were installed, it has been noted that the tendency of most employees is to take their tea around the times when the trolleys used to make their rounds.

Effect on production—management report that neither this tendency, nor

Safe milk safely vended- in hygienic sealed cartons

Dimensions:
Height 77½"
Width 32½"
Depth 18"

A double advantage here.
Milk sold from a Vendo can be taken away or drunk on the spot—simply tear off the carton top and the carton becomes a cup . .
Hygienically-sealed cartons protect your product and your reputation, build goodwill and encourage customers. A welcoming illuminated sign—which can feature your name if desired—adds to the appeal of the Vendo. Standing a little over six feet high and taking up less than half a square yard of ground space, the Vendo can be sited anywhere.
It holds 210 half pint cartons, and can offer 3 selections—say milk, flavoured milk and orange drink. Hire purchase terms available.

SANKEY Vendo

AUTOMATIC MILK VENDING MACHINES

Get the facts.
Just scribble "Vendo" on your letter-head and send to:
Joseph Sankey & Sons Ltd.,
Vendo Division, Hadley Castle Works, Wellington, Shropshire.
Tel: Wellington 4321

the fact that a man can go and get a mug of tea at any time, has resulted in any loss of production time. Rather the reverse.

Workers' response—all in favour: they can get a half-pint mug of tea, hot, strong and sweet to their taste, at any hour of the day or night.

Management response—satisfaction: total takings from tea selling is about the same, although each of the Tea Cubs is vending about 200 cups a day. Cost is slightly higher because the workers want strong, sweet tea.

Saving on staff—the four tea trolleys needed the services of four full-time girls. Now only one part-time girl is needed to service the six machines. In fact, one girl can service up to 20 Tea Cubs in a working day. Direct saving: £750 a year.

Saving on breakages—previously the firm supplied all tea mugs. Breakages were high and replacements averaged £14 a month. Now the firm issues each man with one mug to start with. If he breaks it he has to replace it himself.

There is also a saving in dish washing. In the tea trolley days the mugs were collected and washed in the canteen. Now each man cleans his own mug in the washrooms near the venders, installed in pairs.

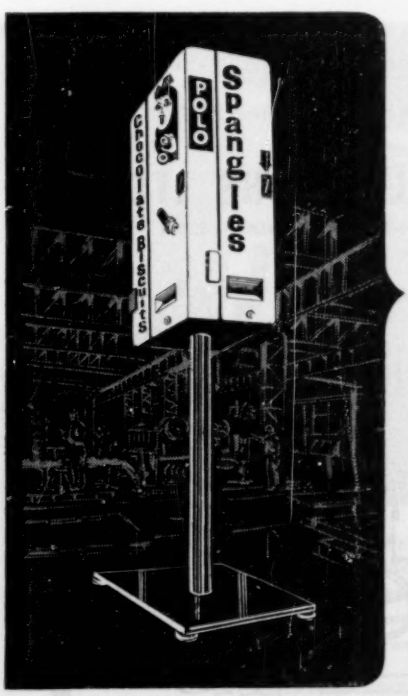
Reaction of the catering manager—"These automatic tea machines are much more efficient and cleaner than the tea trolleys. They are also less trouble, with the consequent saving in labour. With them we can provide a 24-hour service and at the same time have a better control over cash received in relation to the ingredients used. With these six machines we can supply over 1,000 cups of tea in a 24-hour period".

American View

Vending is basically an American invention. The fact that vending manufacturers place us approximately 15 years behind the Americans in its development (particularly where the industrial canteen is concerned) shows that we still look to America for most of our ideas. So when an American vending manufacturer flew into London recently the management and catering Press expected some interesting comments.

As a co-director of Rudd Melikian Inc. of Philadelphia (one of the first and largest automatic vending concerns in the United States), Mr. Cy Melikian is undoubtedly the "morning star" of vending. Outstanding among his suc-

Perky, the electronic tea-maker, takes approximately 7 seconds to dispense a fresh cup of tea, sugared and milked to meet the customers' requirements. Tea will not stew: after remaining in the dispensing chamber for a predetermined period, it will automatically drain itself off and a new brew will begin. Capacity: 640 cups, provided through forty individual 'pots' each of which contains sufficient leaf to make sixteen cups. Frasings Ltd., 94 Park Lane, London, W.1.



A 4 in one
WELFARE WORKER!
'A FISHOLOW VENDOR'

Here's a **new** approach to productivity, keep your workers satisfied in the between-meals period when **you know** productivity slackens. This four-in-one vending machine will dispense Nationally Branded Confectionery on the factory floor. Free insurance. Free Servicing. **Rental 12/11 per week** (Full tax relief). There is also a very adequate profit margin.

Small * Portable * No fixing holes

Enquiries to:-

AUTOMATIC MACHINE ENGINEERS

Candy Vendors Limited

INDUSTRIAL CATERING DIVISION, WETHERBY, YORKSHIRE, ENGLAND.

Dept ('A') Telephone: Wetherby 2493. Telegrams: "Candivend" Wetherby.

By Appointment to
Her Majesty The Queen
Manufacturers of
Kitchen Equipment

NOW! no more 'tea-break' troubles and tantrums

Here's wonderful news for industry and commerce — an *entirely automatic*, round-the-clock fresh tea or coffee service. Just think of the convenience, economy and simplicity of it! No preparation, no trolley service, no long journeys to canteens. Now your staff and employees can have an instant, on-the-spot service at any time wherever they may be.

W. M. Still & Sons have perfected 'Tea Cub' and 'Coffee Cub' self-service machines that provide hot drinks, individually served at the drop of a coin. Hundreds are already in use and have proved a great benefit to morale.

It's pure, fresh tea and coffee.

Each cup of tea or coffee is freshly made on the insertion of a coin. No pills or powders are used — only pure tea or coffee and fresh milk.

Also available are dual-purpose machines which will dispense both tea and coffee.

Tested and proved throughout two continents.

Available on Rental, Hire Purchase or out-right sale.

Write today for full details.

W. M. STILL & SONS LTD.

29/31 GREVILLE STREET, LONDON, E.C.1

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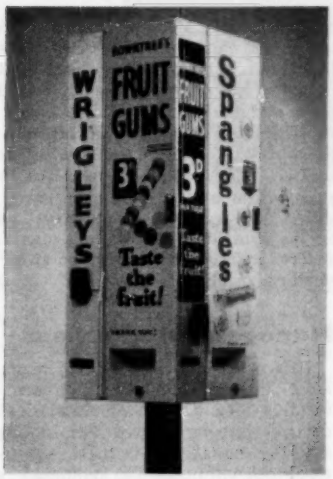


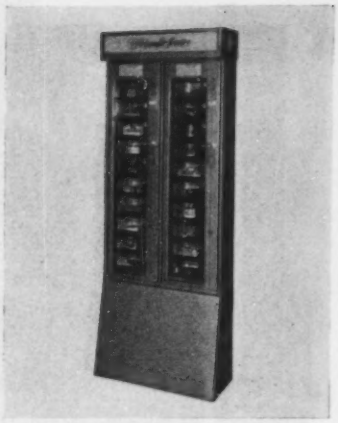
Candy Vendors Ltd. are now distributing this new Fisholow four-in-one vending machine. It has been specially designed for the factory, is small, portable and requires no fixing holes. Each unit is capable of dispensing four nationally branded confectionery lines. With units of this kind installed, employees can get chocolate, biscuits, glucose fruit drops, etc., as a pick-me-up during working hours.

cesses in selling the vending idea to American management is the gargantuan coup of catering automatically for the needs of 360,000 employees of General Motors.

Losing Proposition

The old-style industrial canteen in the USA, he says, is a "serious losing proposition". And not only in terms of money. Food handling methods, he contends, have changed little in hundreds of years. Is it possible to cater *completely satisfactorily* for employees in terms of menu variety, nutrition and portion value? Remember, he adds, you have a captive market here. You must be on your guard against catering inadequacies which can easily create employee resentment.

Mr. Melikian's organisation aims to solve these problems for US management by installing a fully automatic canteen. In this he claims to lead the field. It is based upon the centralised high-speed commissary where the food is prepared and packaged. Hot foods are partially cooked, then refrigerated in the venders. When the customer inserts his coin the selected dish is cooked in a few seconds by ultra high-



This vending machine is one practical contribution to the idea of the "ever-open shop". Banks of these venders, set up in vantage points throughout the company's premises, can solve the employees' shopping problems in industrialised areas where there is no convenient shopping centre—as well as providing for their worktime refreshment needs. Designed to vend (in various types of packages) any number of branded products—depending on the size of the installation—the machine is being distributed by the Automatic Canteen Co. Ltd.

Chadburn Premix Cup Vendors undergoing final assembly and test at our Works.

CHADBURNS

Post mix and Premix

AUTOMATIC DRINK VENDORS

Chadburn coin operated cup vending machines are specially designed for easy servicing and complete reliability. Experience counts—nearly 100 years as Marine, Electrical and General engineers has produced an outstandingly simple and rugged machine designed for *your* market.

FULL DETAILS FROM

CHADBURNS

CHADBURNS (LIVERPOOL) LIMITED,
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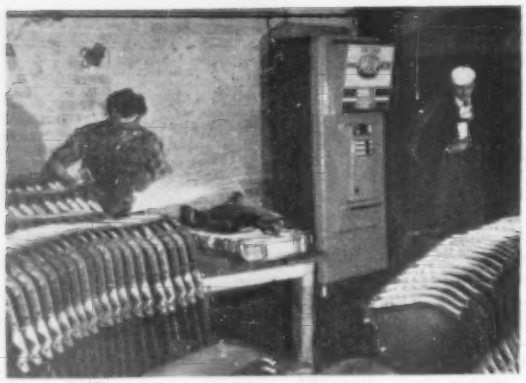
3 Wilton Place, London, S.W.1.
Tel: Belgravia 5849



A cool, refreshing drink of milk for employees working at a hot, tiring job. This machine can be obtained from the Vendo division of Joseph Sankey & Sons Ltd.

frequency rays, and served on an aluminium foil platter at 85 degrees F. There is no wastage. With hygienic preparation and packaging, plus refrigeration—it is claimed that the food can keep indefinitely.

This is a fascinating mechanical revolution in catering. But what of the human element? Americans are wide awake to this problem. In the Rudd Melikian installations uniformed hostesses are in attendance to give change for dollar bills and to issue the week's menu to employees. The idea is taken further: the canteen is given a special name—"a definite personality linked with the romance of food". On the wall is hung a picture of some celebrated chef, while on the menu is one of his own special dishes, his favourite recipe which has been reprinted for employees to take home to their wives. It is important, says Mr. Melikian, to show the customer that there are real people behind the machines.

That is one human problem. Another, just as important, is redundancy of canteen staff. Vending manufacturers argue that this presents a problem only in those under-industrialised areas where there is little demand for this kind of labour. In any case, many of the displaced catering workers can be absorbed into the automatic canteen service. They will be needed for food preparation and machine servicing by established catering contractors who, in the eyes of many vending manufacturers, will be the ideal operators of vending machines.

Management Cautious

It is often said that British management conservatism which treats the vending idea with so much caution, is centred largely around the industrial catering manager. He fears that these machines will make him redundant, and so he is opposed to their installation.

His fears are false, say the makers: he will have to learn new skills, but he will be just as important in the new-style canteens.

WHERE CAN YOU GET THE MACHINES? A list of manufacturers and their chief lines is given on page 36.

Automatic vending of hot and cold beverages is made possible by

MONO

Lightweight **PAPER CUPS**

Most industrial self-service drink units incorporate Mono Paper Cups because they are hygienic, lightweight and easily disposable. *We welcome enquiries and will be pleased to send further details.*

MONO CONTAINERS LTD · CUMBERLAND AVENUE · PARK ROYAL · LONDON · N.W.10 · *Tel: ELGar 4044*

THIS KIND OF "AUTOMATION" MAKES EMPLOYEES HAPPY!

There'll be no disputes about "automation" when you have famous Master Vending Machines installed in your factory. On the contrary—your staff will appreciate having cigarettes, perfume and hand lotion "at their fingertips". And, of course, it takes only a few moments to buy from a machine, compared with several minutes queuing at the canteen.

Our machines are installed, refilled and maintained by an agent. You pay nothing, do nothing, except collect a generous commission on every item sold. In many factories this profit is placed in a staff entertainment or recreation fund—an extremely sound method of improving employer/employee relations at no cost whatsoever.

▲ The handsome Master-Matic cigarette machine is foolproof and rugged in construction. Change is automatically delivered to your employees with each package they buy.

2 ▶ A Master-Matic perfume machine in the rest-room makes women feel good, work well. By inserting a coin they receive a fine spray of their favourite perfume.

◀ 3 This is the "Kitten-Kreme" machine, which dispenses a generous portion of hand lotion for just one penny. Have it fitted right next to the perfume machine.

If you would like any (or all) of these machines installed in your factory absolutely free of charge, write to us now. You will be under no liability whatsoever.

MASTER VENDING MACHINE CO. LTD.

Department 21, 82-106 Cricklewood Lane, London, N.W.2

AN ALL-BRITISH COMPANY WITH BRANCHES THROUGHOUT THE WORLD

THEY MAY HAVE THE MACHINE YOU NEED

Alan Automatic Machines Ltd., 11/13 St. Bride Street, London, E.C.4. (Coffee, hot chocolate).

Anglo-American Chewing Gum Ltd., Imperial Chambers, George Square, Halifax. (Confectionery).

Associated Automation Ltd., 70 Dudden Hill Lane, London, N.W.10. (Tea, coffee, hot chocolate, soft drinks, confectionery, cigarettes, miscellaneous).

Autobars Co. Ltd., 175 High Holborn, London, W.C.1. (Cigarettes, confectionery, miscellaneous).

Automat Machine Sales Ltd., 173 Elmers End Road, Beckenham, South London. (Tea, coffee, milk, snacks, confectionery, cigarettes).

The Automatic Canteen Co. Ltd., 35 Berkeley Square, London, W.1. (Coffee, tea, soft drinks, confectionery, cigarettes).

Automatic Chewing Sweet Sales Ltd., 61 Wigginton Road, York. (Confectionery).

Automatics Trading & Vending Co. Ltd., Challenge House, 174 Perry Vale, Forest Hill, London, S.E.23. (Cigarettes, confectionery).

Brecknell, Dolman & Rogers Ltd., Pennywell Road, Bristol, 5. (Soft drinks, snacks, fruit, confectionery, cigarettes).

British Automatic Company Ltd., 14 Appold Street, London, E.C.2. (Tea, coffee, soft drinks, confectionery, cigarettes).

Candy Vendors Ltd., 23 Market Place, Wetherby, Yorks. (Confectionery).

Chadburns (Liverpool) Ltd., 3 Wilton Place, London, S.W.1. (Soft drinks).

Clayton Bros., 140 East Hill, London, S.W.18. (Soft drinks).

Coca-Cola Export Corporation, 23 Princes Gate, London, S.W.7. (Soft drinks).

Coolers & Venders Ltd., 35 Berkeley Square, London, W.1. (Coffee, soft drinks, soups, miscellaneous).

Ditchburn Vending Machines Ltd., Terminal House, Grosvenor Gardens, London, S.W.1. (Snacks, confectionery, cigarettes, miscellaneous).

Farrow & Jackson Ltd., 41/2 Prescot Street, London, E.1. (Milk).

Frasings Ltd., 94 Park Lane, London, W.1. (Tea, coffee).

H. Griffiths (Caterers) Ltd., 41 Sloane Street, London, S.W.1. (Snacks).

Ice-Matic Ltd., 201 Sydenham Road, Croydon, Surrey. (Ice cream).

Imperial Tobacco Co. (of G.B. & I.) Ltd., G.P.O. Box 2, Upton Road, Bristol, 3. (Cigarettes).

Mars Ltd., Slough, Bucks. (Confectionery).

Master Vending Machine Co. Ltd., 82-106 Cricklewood Lane, London, N.W.2. (Cigarettes, perfume, hand lotion).

National Automatic Machines Ltd., 99 Cobbold Road, London, N.W.10. (Tea, coffee, hot chocolate, soft drinks, confectionery, cigarettes, miscellaneous).

The Nestle Co. Ltd., Hayes, Middx. (Chocolate).

Pepsi-Cola Ltd., River Gardens, North Feltham Trading Estate, Feltham, Middx. (Soft drinks).

Joseph Sankey & Sons Ltd., Vendo Division, Hadley Castle Works, Wellington, Salop. (Milk).

Self-Serve Automatic Machine Co. Ltd., Monument Hill, Weybridge, Surrey. (Confectionery, nuts, miscellaneous).

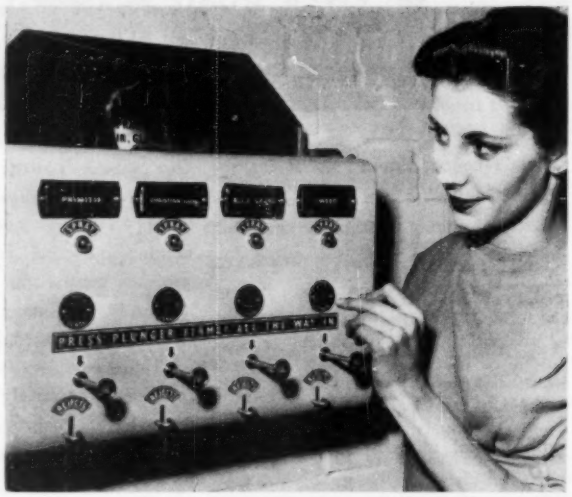
Servumatic Ltd., 335 London Road, Mitcham, Surrey. (Confectionery, nuts, miscellaneous).

W. M. Still & Sons Ltd., 29-31 Greville Street, London, E.C.1. (Tea, coffee, hot chocolate).

Supreme Automatic Vending Co. Ltd., 3 Barry Road, London, N.W.10. (Tea, coffee, soft drinks).

Swift & Swallow Ltd., Airport Works, Rochester, Kent. (Tea, coffee, hot chocolate, soft drinks, confectionery, cigarettes, miscellaneous).

Vendepac Ltd., Slough, Bucks. (Tea, coffee, hot chocolate, milk, soft drinks, food, confectionery, cigarettes).



The Master Matic automatic perfume machine. The customer inserts a coin, presses the plunger and receives a finely atomized spray of her favourite perfume. Other machines by the Master Vending Machine Co. vend hand lotion and cigarettes.

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1 Regent Place, Birmingham 1
Telephone: Central 2212

MANCHESTER
Piccadilly House,
11 Piccadilly, Manchester 1
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OFFICES IN SCOTLAND, SOUTHAMPTON, SOUTH WALES S.B.91

Modifications cost money—detailed planning eliminates expense and practical set-backs at a later stage

It Pays to have your Kitchen Made-to-Measure

By JAMES G. NEW
M.H.C.I., M.R.S.H., G.C.F.A.

IT is only in recent years that the planning of canteen kitchens has provoked interest at top management level. So often in the past, a canteen kitchen has been built to conform with wholly impractical architectural features. Recently, however, more thought has been given to the practical working details of the building and specialist catering consultants have been brought into the picture.

Lack of adequate preliminary preparation will cause serious set-backs in the practical operation of the kitchen. The actual area of floor space of the kitchen will largely depend upon prevailing conditions and the amount of capital available. In general, the layout of the equipment and the location of the various sections should be based on a one-way traffic system. The sequence of operations should be worked out in detail, plotting the route of the food or raw material from the kitchen entrance to the appropriate stores; thence to the various preparation and cooking sections, and finally to the service section. Then follows the return movement after the meal: from the dining room to the washing-up section, and from there back to storage in hot plates or shelves.

Rubber Swing Doors

The kitchen should be sited on the north or east side of the building so that the outer walls remain as cool as possible.

Placing of the goods entrance should permit easy delivery of provisions, while wide passages are essential to facilitate the handling of sacks, crates and cartons to the appropriate stores. Doors are a constant source of hindrance to the storeman or cook coming from the stores with his arms full, or to the canteen assistant coming from the dining room with a loaded trolley. Flexible rubber swing doors clearly have many advantages in kitchens, service and entrances, and between different departments.

Noise is as big a problem in the kitchen as it is on the factory floor and, consequently, noise-absorbent ceilings and walls have almost become standard in modern canteens. But there are still some ways left for the catering manager to cut down on routine clattering. Metal trays are gradually being replaced by attractive service trays in plastic or laminated wood. And we can take this even further. Polythene storage bins have many uses in the kitchen. Light in weight, they are easily stacked and are ideal for storing meat or vegetables in refrigeration, or for carrying cutlery and crockery.

Equipment should be designed and arranged so that lifting and carrying by the staff is reduced to a minimum.

This three-tank gas-heated dishwasher was designed and supplied by EUK Catering Machinery Ltd., Wellington Works, Oldham, to deal with the washing-up problem of J. Lund Ltd., Keighley, in their new works and staff canteen which caters for approximately 150 meals daily.

A contented staff - helps to make a business successful!

LV

Today nearly four thousand concerns all over Britain, using 2,000,000 vouchers a month have found this simple answer.

May we send *you* our brochure detailing our service—the cost of which is now only 1½%.

Ask your secretary to send for this today.

LUNCHEON VOUCHERS LTD

offers a service that helps make this possible

Luncheon Vouchers Limited, Saxone House, 74a Regent St., London, W.1. Telephone REGent 5711

This is not merely making things easier for employees: you can also save a lot of money through increased labour efficiency. Selection of kitchen equipment should be based upon such factors as the estimated number of meals to be produced, any foreseeable increase in numbers, the type of service — main meals or snacks — required.

Natural Lighting

The equipment should be sited well away from the walls to allow free passage for cleaning; pipes carrying essential supplies should, where possible, be brought under the floor, right up to the equipment. Heat radiation from the sides of ovens, steamers, etc., should be kept to a minimum, not only from a fuel economy angle but also for the comfort of the kitchen operatives. The main equipment should be sited where there is good lighting, away from all draughts.

Good lighting is essential and natural light should be exploited wherever possible, for two reasons: economy and the psychological effect on staff. Wherever artificial lighting is used in conjunction with natural lighting, care should be taken to see that the lights are so placed that they do not cast deep shadows or black spots. The size and height of the kitchen, the amount of reflection from surrounding walls and ceiling, the distribution from the fitting — all these factors must be taken into consideration when deciding the required density of light.

Make it Fresh

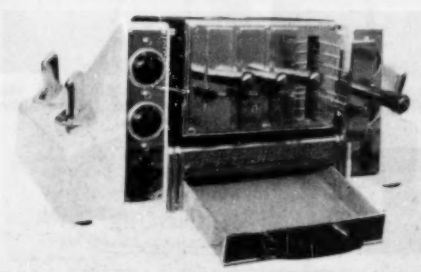
Fluorescent lighting has become popular in recent years. It provides an even light, and shadows are practically eliminated. An added advantage is its low running cost, once the initial heavy cost of installation has been met. It can be installed flush with the ceiling, making it easier to clean; but care should be taken in the choice of tubes. Food takes on an unnatural shade if the wrong colour tubes are used. Tungsten lighting can be used to advantage in spotlighting dishes on the service counter or snack bar.

Low ceilings should be avoided wherever possible. Not only do they have a depressing and oppressive effect on the staff; they require an efficient ventilation system. Adequate ventilation is essential; without it, cooking smells permeate into the dining room, and unsatisfactory working conditions result in the kitchen. A mechanically assisted ventilating system which changes the air twenty times every hour, is ideal. This can be achieved by the use of fresh air intake fans and extractor ventilators, correctly sited in relation to the equipment.

Dispense with canopies or hoods over equipment if possible, for no matter how well they are designed,

(*continued on page* 43)

The Hobart Steakmaster, intended for tenderising lean forequarter or other base cuts of beef, handles any boneless cuts. It shapes irregular pieces and knits together off-cuts into portion-sized steaks. Hobart Manufacturing Co. Ltd., Hobart Corner, New Southgate, London, N.11.



A nominal 10s. 6d. per week rents the Freshburg machine—a four-compartment infra-red grill complete with thermostatically controlled bun toasters and eye-catching illuminated sign. Fresh beef hamburgers are delivered under contract which will give ample margin for profits, for there is no stipulation as to the retail price charged. Freshburgers Ltd., 22 Upper Grosvenor Street, London, W.1.

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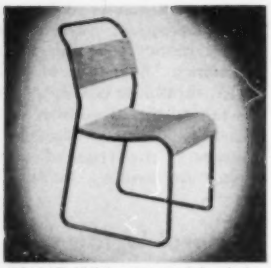
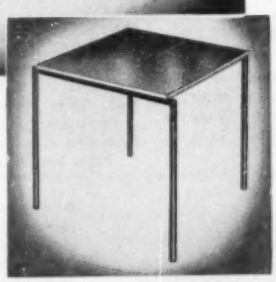
S.3.D.
With seat and back in pre-formed polished plywood, formed plastics or upholstered



M101P With seat and back in polished plywood, formed plastics, wood slats or upholstered.

M123W With seat and back in polished plywood, formed plastics, wood slats or upholstered.

M505U With seat and back upholstered, or of polished plywood or formed plastics.



M118 Table top veneered in heat and stain resisting plastics.

M414 With upholstered seat and back with foam rubber padding.

Cox nesting chairs are made in a variety of styles, each piece having its place in the furnishing of canteens, assembly halls and schools. Cox have been making tubular furniture for 30 years and their reputation for good, well-designed furniture is known throughout the world.

Cox TUBULAR STEEL FURNITURE

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they quickly become ineffective and unsightly if not properly maintained and cleaned. Another disadvantage is that a certain amount of heat from the stoves is reflected back on the people working beneath. Where hoods are needed, the hanging straight sided, wired glass valance is worth consideration as there is a smaller area for dust to accumulate and no heat is reflected.

Mechanical Hands

Washing-up is one of the more mundane tasks in the kitchen — but it has to be done properly. In recent years manufacturers of mechanical dishwashers have improved their designs and have made every effort to produce machines which are attractive as well as efficient. No one wants to work at an ill-designed machine continually enveloped in steam. There are three basic types of machine:

(a) Sink with turbulent immersion, articles are placed in racks and are washed by the agitation of the water by a motor-driven impeller.

(b) Brushes partially below the surface of the water rotating at high speed and removing the dirt from the articles placed between them.

(c) Spray (semi- or fully-automatic); the dirt is removed by high-pressure sprays of water on the article.

In the first two types the articles have to be handled, and sterilisation is carried out in a separate tank of clean water maintained at 180° F. to 190° F. In the third type, sterilisation is carried out as part of the automatic action. After the initial cleaning, injectors known as steriliser sprays force water at 190 deg. F. on the articles

Serious consideration should be given to the siting of the cold room or refrigerator. It would be well to place the refrigeration unit against an outside wall, since working in a hot atmosphere will cause the apparatus to overload, and lead to costly maintenance.

Hard Wearing Floors

Floors in the kitchen have to withstand heavy traffic and the weight of heavy equipment. In recent years, wooden and concrete floors have given way to terrazzo, granolithic chips and quarry tiles. A properly laid terrazzo or granolithic chips floor will stand up to hard wear for a long time and the smooth surface can be easily cleaned. Quarry tiles which are hard and less absorbent have become increasingly popular and the attractive range of colours brightens up the kitchen.

Modern Trends

From the customer's point of view the main stress must be placed on display. The modern trend is to show food under bright lighting on attractive stands or actually to cook it in front of the customer. Catering equipment manufacturers are abreast of the times in the changing habits of the canteen customer. They have realised that, where such a type of open-view snack service is required, compactness is the order of the day. Complete units are now being designed to incorporate all the equipment needed for food cooked to order in the presence of the customer. These units usually include a small fish fryer, heated fish rack, heated chip box, griddle plate, griller, toaster, hot cupboard, hot plates, etc., and embody tea- and coffee-making equipment.

Another addition to the cooking-while-you-wait equipment is an improved grill for sausages. The

(*continued on page 44*)

Here are a few of the many advantages of this new, space-saving, labour-saving, time-saving peeler.

AUTOMATIC TIMER — see panel opposite.
EASY CLEANING — Glass fibre exterior cleans with a wipe. Will not crack, chip or scratch. Totally enclosed motor. Abrasive turntable lifts out for easy cleaning of interior.
PORTABILITY — Easily carried. Can be stowed away after each use.
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QUICK ACTION DOOR — For speedy discharge.
NO INSTALLATION COSTS — Stands on draining board or table. Plugs into electricity supply, connects to nearest tap by rubber hose.
ABRASIVE LININGS — Easily renewable for continued efficiency.

A new Automatic Electric Timer makes this latest Champion the biggest money-saving, easiest operated peeler yet produced. It can be set to switch off the peeler after any period from ¼ up to 4 minutes. You just turn the dial to the figure required and switch on. If the operator is called away or gets on with another job the potatoes will not be peeled to waste. The peeler will stop when the potatoes are ready.

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Problem of Change

(continued from page 17)

departments of a large factory have been working on a piece rate system under the direct responsibility of the works manager who has been with the company for forty years. A few years ago a works study engineer was engaged from outside the firm without the prior knowledge of the works manager.

The new department, which he has organised, has spent the following years checking the old time rates but not looking into the methods of doing the jobs. This has been a big task and has left them little time to set new rates when asked to do so by the supervisors. Now a feeling of antipathy has grown up between the works study engineer and the works manager and supervisors are openly saying that they have lost confidence in the new department.

Why do you think these problems have arisen and what steps would you take now to remedy the situation?

DISCUSSION LEADER

Kitchen Made-to-Measure

(continued from page 43)

sausages lie on rollers, each of which houses an electrically heated element. They do not need to be watched or turned, as the rotating action ensures uniform and thorough cooking without burning. Two switches are provided to control the rollers and heating elements, and with complete absence of smoke or fumes, chipolatas can be cooked in five to six minutes and the traditional sausage in seven to eight minutes, without bursting or burning.

The installation of a "choose your dish" system snack bar so that the customer may choose—and see cooked before him—his particular item on the menu is something new in the field of industrial canteens. This system has been practised in the United States for a long time and it would be useless for the catering manager to bury his head in the sand saying, "It wouldn't work here, my customers wouldn't want it". It may cause a reduction in the normal main meal trade; but it should prove more remunerative, as it is common knowledge that the main meal is usually the one which shows the least profit.

January Diary for Management

BRITISH ASSOCIATION FOR COMMERCIAL AND INDUSTRIAL EDUCATION (26a Buckingham Palace Road, S.W.1.)

12–16 **Berkhamsted.** Five-day residential seminar on supervisor training.
13 **Birmingham.** Graduate training. Half-day study group.
19 **Manchester.** Concern of Industry for Leisure. Open forum.
20 **Wolverhampton.** Supervisory training. Joint meeting with Institute of Works Managers.

BURTON MANOR (Burton in Wirral, Cheshire)

12–23 Supervisory management. Economic and industrial history, industrial and human relations, written and oral expression.
23–25 Youth leaders. Week-end course.
25–30 Introduction to supervision. Course for chargehands and junior foremen.
25–30 Electronics in industry.

INDUSTRIAL WELFARE SOCIETY

7–9 Group leadership. Three-day seminar.
21–23 Work relations for technical managers.

INSTITUTE OF PERSONNEL MANAGEMENT

20 One-day discussion meeting for senior personnel managers.
25–30 Functions of a personnel department. Five-day residential course.

NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY

5–9 Selection methods—I.
19–23 Selection methods—II. Part III follows in February, 2–6.

NATIONAL INDUSTRIAL FUEL EFFICIENCY SERVICE (71 Grosvenor St., London, W.1.)

13–15 Fuel oil-firing. Three-day course for supervisory staff.

SUNDRIDGE PARK MANAGEMENT CENTRE (Bromley, Kent)

25–Feb. 13 Measurements for management. Finance, personnel, production, statistical methods, work study and operational research.
18–23 Development of executives. For senior executives mainly.

UNIVERSITY OF BIRMINGHAM (Institute of Engineering Production)

5–16 Residential course on the design of industrial experiments.

URCHFONT MANOR (Devizes, Wilts)

5–10 Work, leisure and ideas. Six-day course for apprentices and other young workers.
12–17 Thinking, speaking and writing. Six-day course on committee and report work.

December Stop Press

BRITISH ASSOCIATION FOR COMMERCIAL AND INDUSTRIAL EDUCATION

1–5 **Macclesfield.** Apprentice training—the craftsman. Five-day residential seminar.

INDUSTRIAL WELFARE SOCIETY

Non-residential courses at Robert Hyde House, London.

4 Receptionists and reception-telephonists.
9 Visual aids for operator and apprentice instructors.
10 Chargehands and potential chargehands.

UNIVERSITY OF BIRMINGHAM (Institute of Engineering Production)

8–19 Operational Research course.

COLLEGE OF TECHNOLOGY, BIRMINGHAM (Department of Mathematics)

10 One-day conference on electronic digital computers and their industrial applications.

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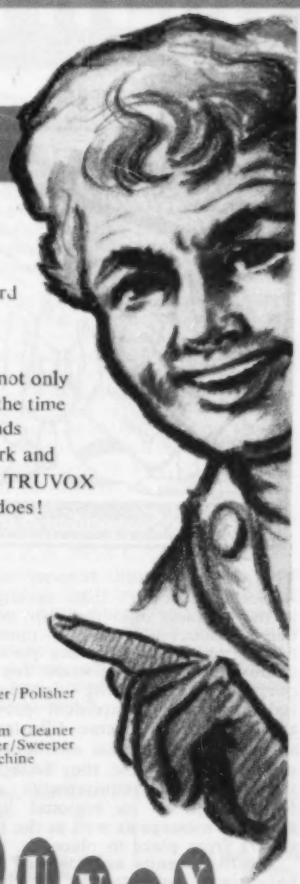

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EQUIPMENT MARKET

Efficiency Aids

JOINS CLOSELY

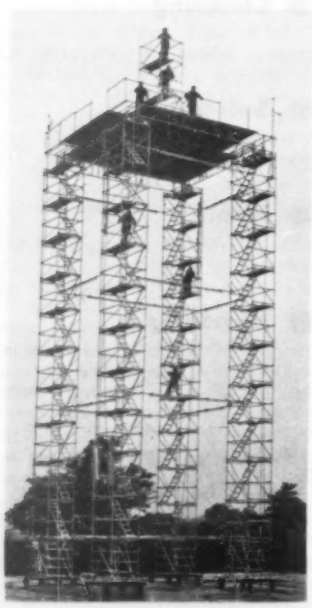
DOUBLE-SIDED self-adhesive tape has been developed to give an extremely thin, yet strong, mounting medium where surfaces have to be joined as closely as possible. Examples: mounting rubber printing stereos, holding down materials and templates during drilling processes, fixing carpets to floor surfaces, jointing the ends of sheets or rolls of cloth or metal to give a continuous feed through stamping machinery.

They appear to save time and materials, especially where a temporary fixture is required and are quick and easy to apply even to most irregular surfaces. Widths up to 12½ in. have been supplied.

John Gosherson & Co. Ltd., Packaging Tape Centre, Vauxhall, London, S.E.11.

MOBILE SCAFFOLDING

FROM the date of the order to delivery took one month, say the makers of this "Zip-Up" construction which was used by a Dutch company for their work of cleaning and renovating cathedrals and principal churches. The actual assembly of the structure, they say, took a team of eight men four hours to erect.



In the assembly, not one nut or bolt is used. The unit is completely mobile and can be made to stand firm on uneven surfaces and slopes by adjustment of the legs which allow for a two-foot margin. The ladders between stages are part of the structure and their position inside the structure is a form of protection for the workmen who use them.

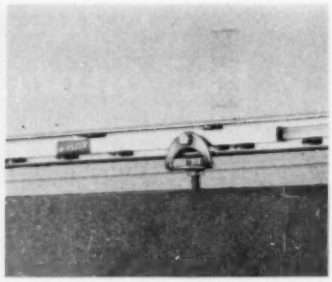
Access Equipment Ltd., Maylands Avenue, Hemel Hempstead, Herts.

HUMOUR IN POSTERS

IN works posters, humour is even more necessary than variety. This is the opinion of a designer who has been producing them for more than fifteen years. During this period, his studio has drawn posters for many purposes: increasing productivity, reducing wastage, accident prevention and suggestion scheme (illustrated is an example of the last mentioned). In each and every case, they have studied the individual requirements of the factory and of its regional location, since the message as well as the humour differs from place to place.

Positive results are claimed for the campaigns undertaken which have covered a variety of spheres—from motor companies to Government training establishments. And although the studios lay stress on humour, they also recognise the scope for a human approach on subjects which do not lend themselves to humour.

R. Glasscock Studios, 71 Old Market St., Bristol, 2.



RUSTPROOF DOOR GEAR

THIS new sliding door gear utilises two main running rails made of an aluminium alloy which is light and easy to handle and erect. There is a steel stirrup attachment, cadmium-plated to resist corrosion which is fixed to the door by means of a vertical adjusting bolt and fixing plate. The stirrup is secured to the inner sliding rail of the gear by a single screw enabling the gear to be quickly and easily removed if necessary. Positive fixing is provided by a shakeproof washer. The bottom of the door is held by a neat fibre guide screwed to the floor at the side of the opening and running in a small channel in the underside of the door. This guide is positioned so that half its length remains in the channel when the door is fully opened or closed, leaving the threshold free from obstruction.

Coburn Engineers Ltd., Coburn Works, Peasmarsh, Guildford, Surrey.

REPLACES MOTION

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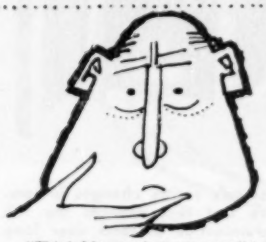
Siramco Ltd., 1 Lexham Mews, London, S.W.7.

Welfare

TWO IN ONE

GERM-FREE telephones and air freshener are now offered in one small unit. By placing the telephone on the Sanophone unit for 15 to 20

The talkative type
from the film "All I want is a Conference"



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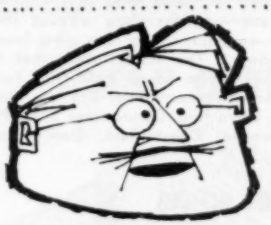

"If they'd done it my way" type
from the film
"The Foreman Discovers Motion Study"

The Dogmatic type
from the film "Subject for discussion"

YOU'VE MET THEM!

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Words like 'increased production', 'preparing for the common market', become meaningless without plain industrial understanding right at home. But the problem needs to be studied and the lessons taught. And it is now generally accepted that there is no better way to do this than by film. Points brought out in film, graphically and strikingly as only film *can* bring them out, are remembered, thought about, and *acted on*.

The G.B. Film Library's comprehensive selection of 16 mm. Industrial Training Films includes many films which study the problems of Industrial Relations, Welfare, Salesman-training—problems whose solution must be the urgent concern of every management.

"We're just cogs in the wheel" type
from the film "Supervise With Care"

"You'll find out" type
from the film "First Impressions"

"They never tell us anything" type
from the film "Production 5118"

The "Me and the Lads" type
from the film "The Inner Man Steps Out"

SEND FOR YOUR CATALOGUES TODAY

You'll find there are films to fit your problems, and your problem people. Send this coupon now, to:—

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Proprietors:

Rank Precision Industries (B.A.F.) Ltd,
1 Aintree Rd, Perivale, Greenford, Middx.
Telephone PERivale 7481/9

Please send me

16 mm. Industrial Training Films Catalogue (Free)
16 mm. Sponsored Film Catalogue (Free)
16 mm. Entertainment Films Catalogue
(I enclose P.O. for 2/6)

(DELETE WHICH NOT REQUIRED)

NAME _____

ADDRESS _____

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PM/12/58

EQUIPMENT MARKET

Efficiency Aids

JOINS CLOSELY

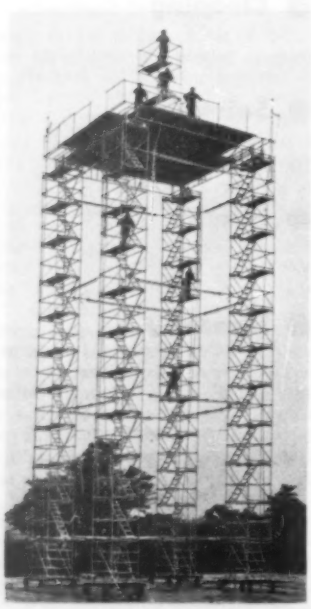
DOUBLE-SIDED self-adhesive tape has been developed to give an extremely thin, yet strong, mounting medium where surfaces have to be joined as closely as possible. Examples: mounting rubber printing stereos, holding down materials and templates during drilling processes, fixing carpets to floor surfaces, jointing the ends of sheets or rolls of cloth or metal to give a continuous feed through stamping machinery.

They appear to save time and materials, especially where a temporary fixture is required and are quick and easy to apply even to most irregular surfaces. Widths up to 12½ in. have been supplied.

John Gosherson & Co. Ltd., Packaging Tape Centre, Vauxhall, London, S.E.11.

MOBILE SCAFFOLDING

FROM the date of the order to delivery took one month, say the makers of this "Zip-Up" construction which was used by a Dutch company for their work of cleaning and renovating cathedrals and principal churches. The actual assembly of the structure, they say, took a team of eight men four hours to erect.



In the assembly, not one nut or bolt is used. The unit is completely mobile and can be made to stand firm on uneven surfaces and slopes by adjustment of the legs which allow for a two-foot margin. The ladders between stages are part of the structure and their position inside the structure is a form of protection for the workmen who use them.

Access Equipment Ltd., Maylands Avenue, Hemel Hempstead, Herts.

HUMOUR IN POSTERS

IN works posters, humour is even more necessary than variety. This is the opinion of a designer who has been producing them for more than fifteen years. During this period, his studio has drawn posters for many purposes: increasing productivity, reducing wastage, accident prevention and suggestion scheme (illustrated is an example of the last mentioned). In each and every case, they have studied the individual requirements of the factory and of its regional location, since the message as well as the humour differs from place to place.

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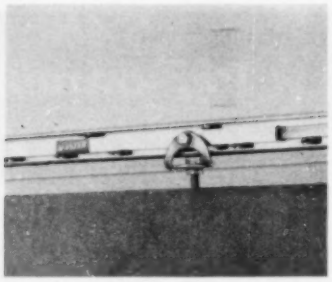

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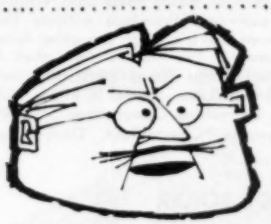

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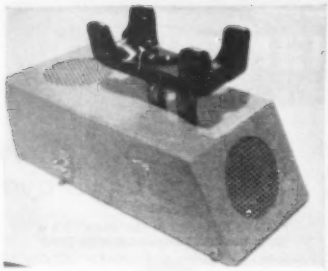


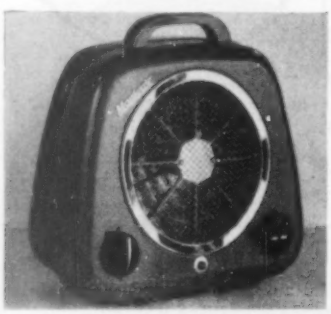
seconds, the ear and mouthpiece are automatically sterilized and all odours are removed. It works off any electric mains supply and requires no refilling.

For freshening the air in the office itself, the same unit is merely switched on. It raises the oxygen content in the room and discharges from six to eight milligrams of ozone per hour. The equipment, which, say the makers, costs approximately 2d. per week to run, is available on rental for £1 per month.

Sanophone R.A.B. Products, 31 St. George Street, Hanover Square, London, W.1.

SAFE CIRCULATOR

This new Magicair electric warm or cool air circulator comes in a portable steel case, finished in two-tone colouring. Available for any voltage A.C., it is adjustable to three speeds of heat (625 W—1250 W—2500 W) and of fan. Safety feature—a black heat element and a pilot light which indicates when it is in use. Priced at 11 guineas, it is produced by Magicook Appliances Ltd., Shirland Mews, London, W.9.



PROTECTIVE LINING

SPECIAL boot-liners which keep the feet at their normal temperature and in perfectly dry condition have recently been introduced from Germany. They are made from multi-layer hair fleece which is then built on to a moisture-absorber and outer lining to give a sock-type shoe.

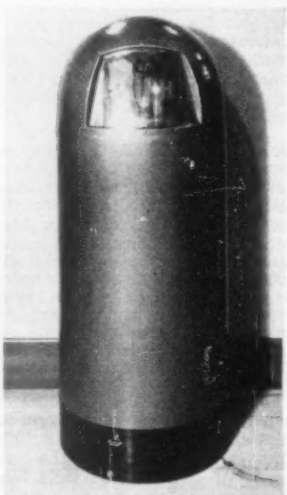
The hair has the property of diverting perspiration from the feet and assists evaporation. These liners, worn over the socks and under rubber footwear, give excellent protection in cases where continuous wearing of rubbers is necessary. They are made in sizes 6 to 12 for men; 3 to 5 for women at 14s.

Cormack of Granton Ltd., West Shore Road, Granton, Edinburgh, 5.

Canteen

EASY DISPOSAL

HAND in hand with cup drink machines comes the Supa-Bin waste receptacle. Although the makers intend it primarily for the disposal of vending machine cups, it can also be considered as a possible solution to other waste clearance problems. Two



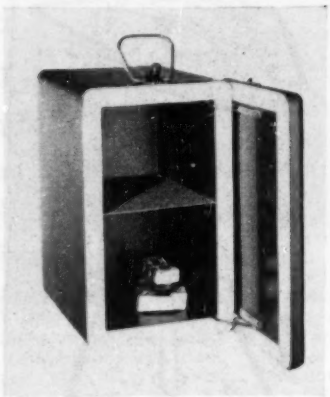
features which may well induce greater cleanliness and tidiness are the self-closing chromium-plated push door which requires no effort to use and the rubber door silencer.

When the bin is full, quick emptying is carried out by simply removing an outer shell and carrying away the galvanised inner container by its swinging handle. Cleaning both inside and out are made easy by the round contours of the shell and container.

The bin stands just over three feet high and has a stove-enamelled finish and chromium trim to match the vending machines made by the same company. It is, say the makers, "a beautiful new type of receptacle".

Ditchburn Vending Machines Ltd., Terminal House, Grosvenor Gardens, London, S.W.1.

HOT AND COLD



This box-safe resists changes in temperature and thus reduces the risk of contamination of food over long periods. It will keep hot food hot and cold or frozen food cold without the use—and therefore without the cost—of electricity or any other form of power. The makers state that it will even keep bread fresh from two to three weeks. Price: £13 19s. 6d. from Berresford Concessions Ltd., 99 Saltergate, Chesterfield, Derbyshire.

STURDY BOILER

BOILING water within 10-35 seconds from cold is what the makers of the "Multiflow" range claim for their new steam heated boiler. The output, they say, is very large for the size and cost. Example: the No. 1 size costing £61 has an output of 550 pints per hour; the No. 2 at £75 gives 800 p.p.h. and the No. 3 priced at £87 gives 1,000 p.p.h.

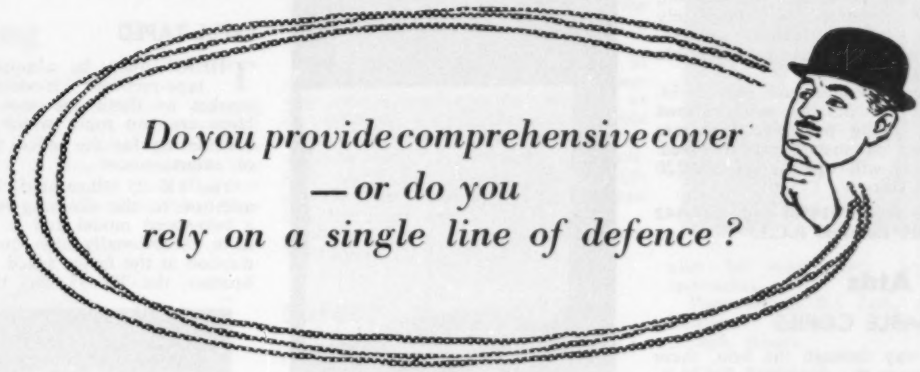
The boilers are designed to stand up to very heavy use and this, combined with very simple operation, seems to make them suitable for use by non-catering staff, workmen or tea-boys. Constructed of heavy guage mild steel and copper, they are nickel chrome plated externally and all joints and fittings are brazed.

Stott Ltd., Oldham.

AUTOMATIC PEELER

TIME- and money-saving are two features of the Champion Super 7 portable electric potato peeler which are worth noting. It has an automatic timer as a standard fitting which will switch off the peeler after any period from half a minute up to four minutes. It will peel 7 lb. of potatoes in one or two minutes, discharging both waste and potatoes

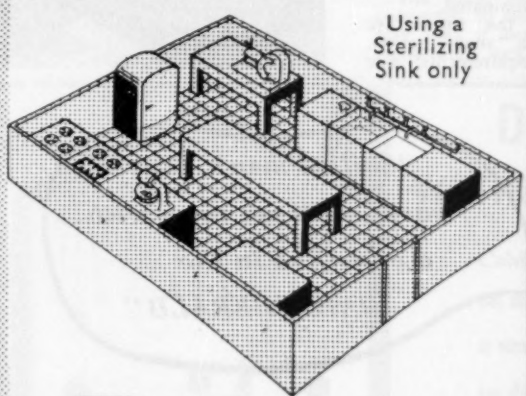
Food Hygiene Insurance Policy



Do you provide comprehensive cover
— or do you
rely on a single line of defence?

SINGLE COVER POLICY

Using a Sterilizing Sink only

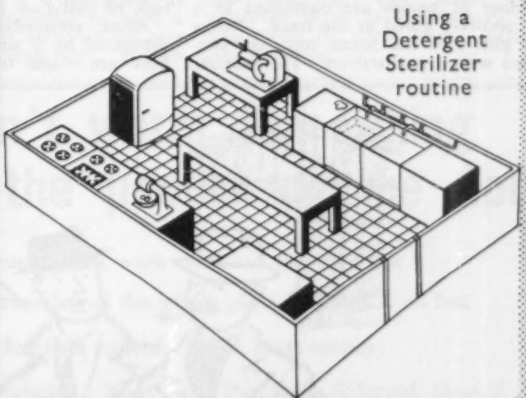


STERILIZED AREA

INFECTED AREA

COMPREHENSIVE POLICY

Using a Detergent Sterilizer routine



STERILIZED AREA

INFECTED AREA

TAKE OUT A COMPREHENSIVE HYGIENE COVER TODAY!

Invest in all-round sterilization

USE STERGENE & DOMESTOS or HYTOX

DOMESTOS LIMITED, COLLEGE WORKS, ALBION ROW, NEWCASTLE UPON TYNE, 6.

direct into the sink or an interceptor basket.

The peeler is extremely light, by virtue of its glass-fibre casing and aluminium peeling chamber. These features also recommend it from the cleaning point of view. In addition, the electric motor is completely enclosed to reduce cleaning requirements, although it is easily accessible from below.

It occupies a table space only 20 in. by 12 in. and can be easily stored after use. Being portable, there are no problems of installation involved. The machine will operate on 200/220 or 230/250 volts.

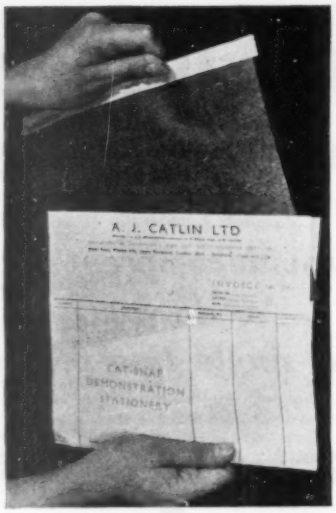
Medcalfe & Co. (1950) Ltd., 141-142 Saffron Hill, London, E.C.1.

Office Aids

INSEPARABLE COPIES

ON its way through the firm, there is always the danger that a business form may become separated from its copies or that the register between them is disturbed. To overcome these difficulties, a form of stationery called "Cat-Snap" has now been marketed.

The top sheet, carbons and required number of copies are combined in a set, securely glued at the head. Below the glue line the forms only are provided with a perforation. The carbons



are not perforated and are about ½ in. shorter than the forms. The set thus remains in perfect alignment while passing from hand to hand, and copies cannot be lost. In addition, the initial task of collation is eliminated.

After completion, the forms are separated by a simple "snap" action. Sets are made to requirements; size and number of forms being determined by the user. They are suitable for use in typewriters and office machines, and can also be written on by hand.

A. J. Catlin Ltd., Jasper Road, London, S.E.19.

WELL TAPED

THERE must be almost as many tape-recorder models on the market as there are uses for them. Here are two more which are worth considering for the office, the meeting or entertainment.

The TK 25 (illustrated) is the latest addition to the Grundig range. It is a two-speed model and is claimed to have exceptionally high quality reproduction at the faster speed. Its bigger brother, the TK 35, has three speeds

"Skilled men? That's easy—we'll get them with a classified in the DAILY HERALD"

THERE ARE MORE than 3,000,000 skilled men and women amongst the readers of the DAILY HERALD —by far the best pool of labour that you can draw upon.
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Series Discounts—5% on 3 insertions within 7 days
10% on 6 insertions within 14 days.

DAILY HERALD

CLASSIFIED ADVERTISEMENT MANAGER, DAILY HERALD, Acre House, Long Acre, London, W.C.2 or 2/4 Oxford Road, Manchester, 1.

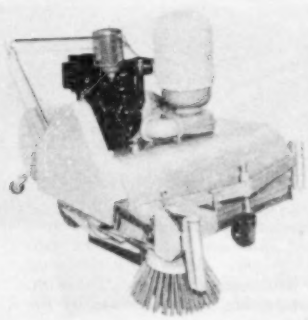
and at 7½ in. per second will give one and a half hours recording time. They cost 62 gns. and 82 gns. (Excluding microphone) respectively.

Grundig (Great Britain) Ltd., 39-41 New Oxford Street, London, W.C.1.

Cleaning

ECONOMIC SWEEPER

REDUCTION of industrial cleaning costs by as much as 80 per cent is claimed by the makers of the Wilshire industrial power sweepers. The Wilshire "800" series (we illustrate model 833) is produced in three sizes for sweeping paths 24 in., 36 in. and 48 in. wide, according to the width of the aisles and openings through which the machine has to pass.



Incorporated is the "Duscon" control system which filters the air and automatically separates the dust from the debris. This eliminates the necessity of laying dust with a sprinkler.

A side sweeper attachment fitted at the front of the machine on a two-way swivel head can be supplied as an optional extra. It enables the operator to sweep right up alongside walls or stacks of material. A detachable sulky is also available which permits the operator to ride when cleaning large areas.

Matling Ltd., 26-32 Caxton Street, Westminster, London, S.W.1.

Safety

ADJUSTABLE VISOR

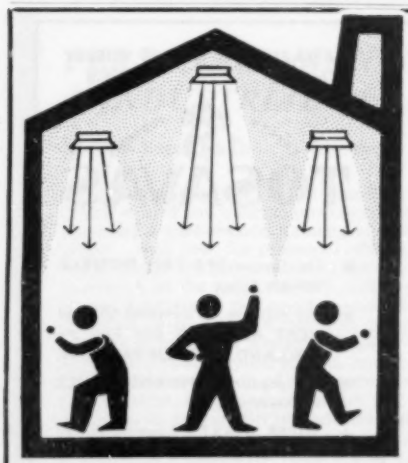
THE need for the usual overhead harness is eliminated by this general purpose faceshield. The inner side is bonded with washable Sorboprene cushion lining, which fits against the wearer's forehead.

The visor, which is shatterproof, is connected to the headband in such a way that it can be adjusted to any angle and locked instantly. It can also be worn over any personal spectacles.

Parmelee (G.B.) Ltd., 39 C & D Bedford Avenue, Trading Estate, Slough, Bucks.

MOVE SAFELY

A MAXIMUM freedom of movement is allowed with this Spembly protective suit, especially designed for the Atomic Energy Authority. Full protection is given against radioactive dust and the suit seems useful wherever there is atmospheric contamination by toxic fumes, gases or dust particles.



Don't warm the ceiling warm the people on the floor

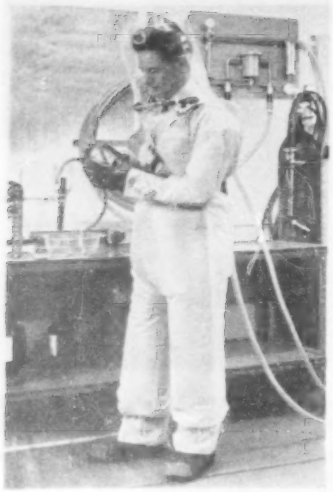
Cold people can't work well, but money spent on the warming of the whole place for them is all but a small fraction wasted. Work costs money; so does heating. That's why Parkinson-Schwank *located* radiant gas heating is the way modern industries are getting the most for their wage and heating bills.

PARKINSON–SCHWANK *radiant heat by gas*

Parkinson-Schwank heaters are undoubtedly the best and are cheap to install. Radiant heat by gas, is directed towards the people. The Parkinson-Schwank units can be suspended or wall-mounted. They turn on and off like a light; that, too, makes for economy!

PARKINSON COWAN
INDUSTRIAL PRODUCTS

COTTAGE LANE, CITY ROAD, LONDON, E.C.1
TEL. CLERKENWELL 1766/7



Special features include full ventilation to the body extremities, and helmet air supply, both controlled by the wearer; reduced fatigue since the weight of the air hose is taken by a special harness; and unrestricted vision in all directions.

British Geon Ltd., Devonshire House, Piccadilly, London, W.1.

Health

DANDRUFF— SUGGESTED CONTROL

DANDRUFF is no longer a trivial disorder, say the makers of Lenium. There is a close connection with seborrhœic dermatitis. They claim that this product is the first to meet all the requirements of a satisfactory medical treatment: dissolving action on excess scales on the scalp, penetration to the skin beneath the top layer, harmless to the user, rapidly effective against staphylococci, slightly acid and easy and pleasant to use.

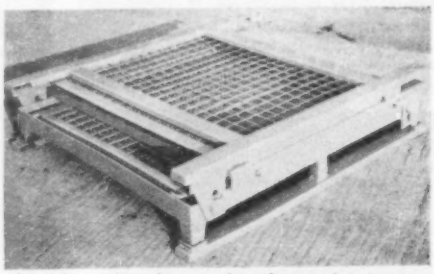
Lenium, they say, starts where every other treatment leaves off. It is composed of selenium sulphide, which has scale-dissolving activity, and Lorothidol, which acts rapidly against the bottle-bacillus and virulent bacteria.

It can be used before or after an ordinary shampoo. This was one feature which the makers claim to have found during initial use in Sweden. Price: 4s. 11d.

Bayer Products Ltd., Neville House, Eden St., Kingston-on-Thames, Surrey.

Handling

ALL PURPOSE PALLET



Constructed of angle and pressed steel to provide a high strength to weight ratio, the Flowpack collapsible box pallet—"L" type—is said to cater for all requirements. When the pallet is empty the two detachable sides are easily removed and nest in the pallet bays. The patented self-locking hinged ends are then lowered into the collapsed position as shown in the photograph. Pallets are designed by the makers (Fisher & Ludlow Ltd., Material Handling Division, Bordesley Works, Birmingham, 12) to be stackable when collapsed, for return shipment.

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TOSAVAS

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★ The popular **COMMANDO SOLE** for heavy duty.

★ **SUPER SMART** Lightweight Welted Shoes for Men.

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Advertisement, editorial and sales offices: Mercury House, 109-119 Waterloo Road, London, S.E.1 (Waterloo 3388).

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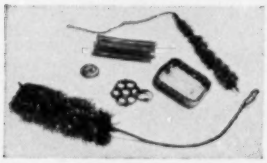

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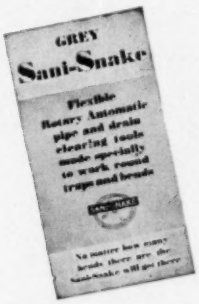

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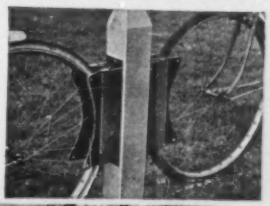

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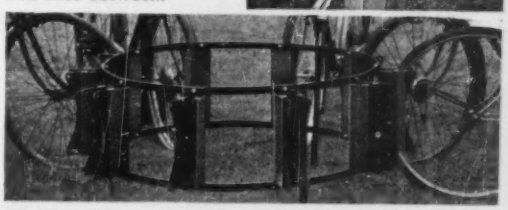

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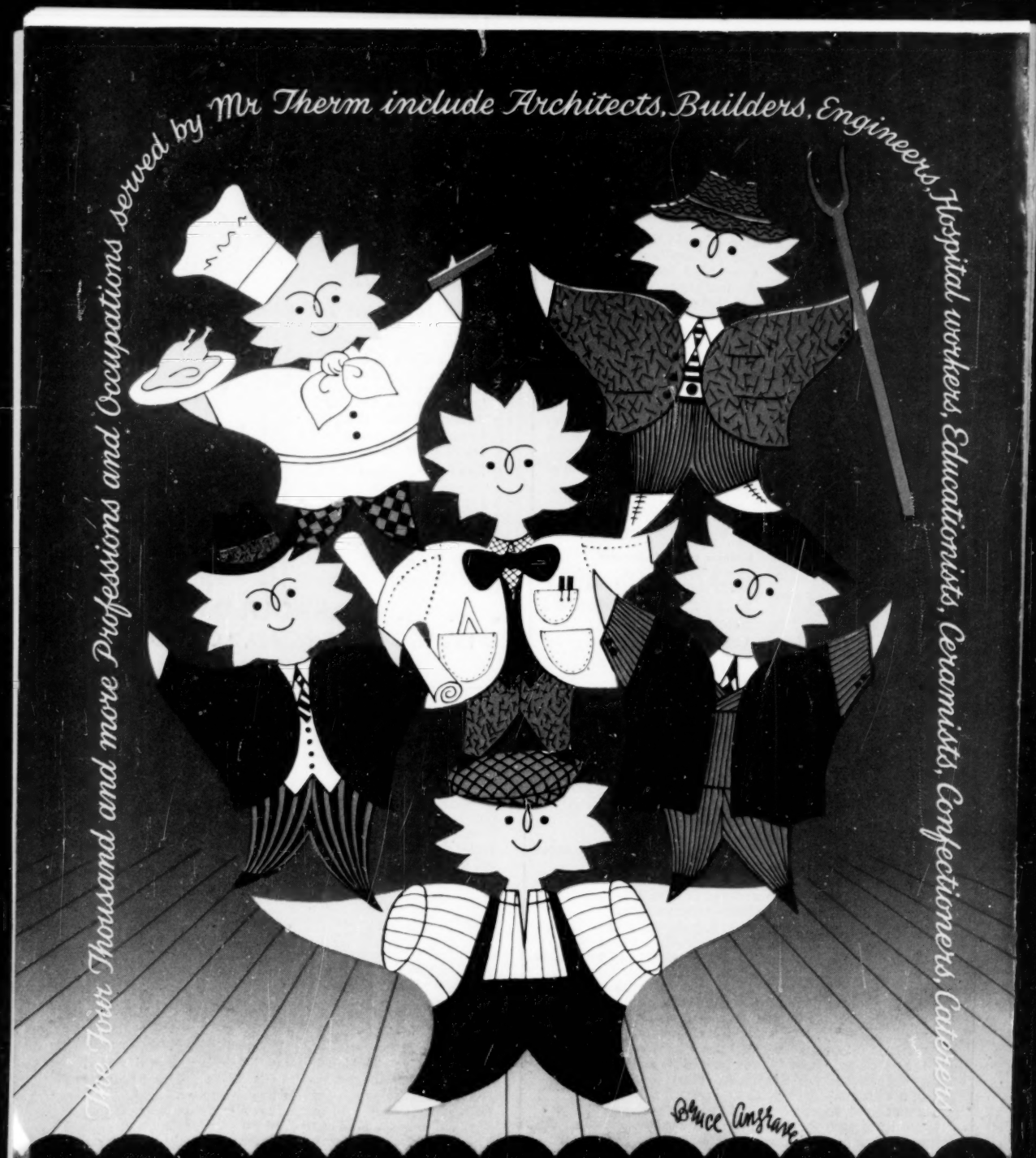
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